11 Mellen St. Cambridge, Mass.
June 13 - 1897.

Mr. George E. Davenport,
Hamilton Place, Boston,

Dear Sir:

It seems imperative for me to bring my work at the Gray Herbarium upon my Mexican and Central American plants to a close; If I close my work the middle of the week as it seems probable I shall do, I shall have no time to do any thing with the ferns. As yet I have not unpacked them. I address you to see if you would like to work them up for a set, I doubt not but you can match off the bulk of them very readily with specimens in your collection. Will you please let me know your wishes in the matter at your earliest convenience as in this case I will have to get out a set for you before probably Wednesday noon. I am too busy try to finish as much work as possible, to go and see you as I should like to do. There are about 230 numbers I think about 200 species mostly from Southern Mexico

If I can get a little time I will match of
some of the commoner species but at best I can do
but little, Enclosed find stamp for reply.

I am Very Sincerely yours,

Chas. F. Smith.

UNITED STATES DEPARTMENT OF AGRICULTURE,
DIVISION OF VEGETABLE PHYSIOLOGY AND PATHOLOGY,
WASHINGTON, D. C.

K

June 6, 1898.

Mr. Warren H. Manning,

1146 Tremont Building,

Boston, Massachusetts.

WARREN H. MANNING,
LANDSCAPE ARCHITECT, Boston, Mass.
Rec'd JUN 7 1898

Dear Sir:

I am in receipt of a communication from your committee dated June 4 and relating to the plans of Section G of the American Association at the Boston meeting. As yet we have made no definite plans. It seems to me it might be an excellent idea to arrange for at least two trips, one inland and the other to the sea shore, to be made the same day or on different days, as best suits your convenience. Would it not be well to consult with Doctor Farlow, the president of the section, who is on the ground?

Yours very truly,

Erwin F. Smith
Secy Sect. G.

N.E.F.

A Desiderata of John Donnell Smith.

Notholoena tenera.
Cheilanthes Wrightii.
" " leucopoda.
" " Lindheimeri.
" " argutea. ✓
Pellaea aspera.
" pulchella.
" ternifolia.
Pteris longifolia.
Adiantum trichochlis.
Lomaria Spicant.
Asplenium ciceutarium.
Phegopteris calcarea.
" dispestris.
Aspidium Oreopteris
" noveboracense.
" Filix-mas.
Cystopteris montana. ✓
Woodsia scopulina.
Aneimia Mexicana.
Botrychium boreale.
Ophioglossum vulgatum.
Notholoena Grayi.

Notholæna nivea.

" Lemmoni.

K

75 Park St. Balto. May 4: 78.

Dear Sir;

After Mr. Eaton had taken out a couple of specimens, and I as many, I sent the rest of my Ophioglossum palmatum (perhaps four fertile and eight sterile fronds) to Mr. C. F. Austin, Clinton, N. J. I have just written to him, requesting him to send you if possible a specimen.

I collected (Catonahatchie River, Fla. Mch. 17: 78) every scrap I could find of this interesting fern; but you see, it was only in a small quantity. I found it on only two trees (Sabal palmetto), and yet I searched for it during several weeks on hundreds of trees.

My fern collection is quite a powerful one, consisting almost entirely of species collected by myself in Maryland, Virginia and Florida; and the specimens are not generally poor ones, being the ones I first met with of each species.

The specimens are poor ones, and in poor condition; but if they would be of any use to you, I would send you - Polypodium phyllitidis - P. aureum - Vittaria lineata - Pteris aquilina, var. candata - Blechnum serrulatum - Aspidium patens - A. Floridanum - Nephrolepis exaltata - Acrostichum aureum.

Any of the rare species, you name in your postscript, would be extremely acceptable to me, and I should feel much obliged, - regretting I have no equivalent to send you.

Should I visit South Florida next winter, as is my present purpose, I will endeavor to make better collections of Ferns. Living on board small open boats, as we have, I have found it difficult on former trips to properly care for the larger plants: my collections have been chiefly of Musci, Hepaticæ and the more minute Cryptogamiæ. very truly Yrs. John Donnell Smith

K

73 Park Ave., Baltimore
May 27th 1878.

Dear Sir:

I send you today a package of Florida Ferns. I fancy you will find nothing in it of value except the spec. (fertile & sterile fond) of Ophioglossum palmatum.

In regard to my desiderata. It is easier to give a list of the spec. I have, than of those I have not. My little collection of U. S. ferns consists only of those I have collected in Maryland, Virginia & Florida, and embraces:

Adiantum aureum.
Polypodium vulgare.
" vacuum.
" phyllitidis.
" aureum
Cheilanthes vestita.
Pteris aquilina.
" " var. candata.
Adiantum pedatum.
Vittaria lineata.

Blechnum serrulatum.
Woodwardia Virginica.
" angustifolia.
Camptosorus rhizophyllus.
Asplenium ebenoides.
" Trichomanes.
" montanum.
" ruta-muraria.
" serratum. (D.C. Eaton comm.t)
" filix-fœmina.
" Thelypteroides.
Phegopteris hexagonoptera.
Aspidium acrostichoides.
" Thelypteris.
" Noveboracense.
" patens. vidium
" spinulosum.
" Cristatum.
" " var. Floridanum.
" Goldianum.
" marginale.
Onoclea sensibilis.
Woodsia obtusa.
Nephrolepis exaltata.

Dicksonia punctilobula.
Osmunda regalis.
" Claytoniana.
" cinnamomea.
Botrychium Virginicum.
" lunarioides.
Ophioglossum palmatum.

I shall be grakified to receive anything it may suit you to send; but it seems only right to let you know, that such varities, as some of those you name might be more usefully placed elsewhere than in my herbarium.

Yours truly,
John Donnell Smith

I have called Mr. Eaton's attention to some characters in Ophioglossum palmatum; such as—fertile frond palmately parted nearly to base (not palmate);—division acute: fertile frond often dichotomously branched.

K

75 Park Street, Baltimore
19 Febry. 1879.

Geo. E. Davenport, Esq.
Boston.

Dear Sir;

In my only two remaining specimens of Ophioglossum palmatum, and in three specimens from S. America that I have seen in Washington, the number of fertile spikes agrees with that of the sterile divisions on the same frond. I regard this as only a coincidence; but it makes me curious to know how it may be with other specimens. Will you please examine your specimen that I sent you, and let me know how many fertile spikes it bears, and how many divisions there are to the sterile segment.

I leave for Florida on 24th, and hope I may hear from you before that day. But my letters will be forwar-

Since writing the above, I have found a few specimens of Polypodium plumula growing in crevices on the face of rocks; roots spreading out and taking close hold of the rock, just as it does of the bark of trees. D.D.

Ocala, Marion Co. Fla.
April 5th 1879.

George E. Davenport, Esq.
Boston.

Dear Sir;

Your Postal of 18th March and letter of 20th were forwarded to me at this place.
I have collected in ample quantities, and in forms to show the entire plant, the following ferns, which you name as above:

Polypodium pectinatum. South shore of Lake Ashaculla Sumter Co; growing on sides of banks only where red clay is intermixed with sand. Fronds 12'-24' long; many of them fruited.
P. plumula. High Hammock on south side of Lake Ashaculla; growing on rough bark at base of trees. Quite distinct from P. pectinatum. Pinnae, when dry, strongly involute - even circinnate. Fronds 2'-8' long. None in fruit.
Pteris Cretica? Edges of limestone "sinks" or chasms, Marion Co. well fruited.
Adiantum tenerum? Sides of a Sink, Marion Co. None fruited. The skeletons of last years fronds are over 2 feet high; and they show socket-like ends of the petiole, from which the segments have fallen away.

Asplenium firmum. Rocky sides of cavernous Sinks, (Largest specimens 8' ~~11~~ 14' long. Marion Co.) bulb fruiter

Asplen. myriophyllum. Cavernous places at Scotts Spring, Marion Co. Growing only at the bottom of little holes in the rocks, from which it requires some care to extract the plant with its roots. The holes are generally 1/4 inch in diameter and about an inch deep; and the fronds lie flat on the face of the rock around the hole. Abundantly fruited. Largest fronds about 4' long.

Asplen. dentatum? }
trichomanes? } Rocky crevices. Apparently two forms; but I have not observed them closely. I have large stocks from various localities, and probably A. parvulum will be found among them.

Asplenium ebeneum? from different places in Hunter & Marion Co's

I have also specimens of other Ferns; such as the Osmundas, Blechnum serrulatum, Nephrodium cristata, Aspidium patens, A. unitum var glabrum. But I presume these will have no particular interest. Botrychium virginianum.

I forwarded to Capt. Brown St. Thursday Letter of introduction with a note, expressing a desire to meet him on my arrival here one week ago; but I have not seen him. I fear therefore I shall not obtain Asplen. ebeneum. I may call here on my return northwards in a few days, when I must St. Adams, and see some chance of collecting the last named fern.

I propose on reaching Balt^o (about 20th) to forward my collections to Prof. Eaton in order that he may select anything that may be useful to him. I will then take great pleasure in sending you ample specimens of everything you may desire.

I have as usual occupied myself mainly with Mosses, and have large quantities of both them and Hepaticae for M. Austin. I have also fresh-water Algae for M. Wolle.

The flowering plants, so far I have had leisure and opportunity to determine them, appear to be only well known plants.

If I had the planning of another trip in Florida, with especial reference to collecting Ferns, I should endeavour to find the southernmost point in the State to which the high hammock strip of land extends, which begins about Lake City, passes by Gainesville, Ocala, and the head waters of the Withlacoochee. If time permitted I should go from here to that locality, and should expect to find something new in the rocky and cavernous, and rocky ledges about of Lake Panasoffkee.

Very truly yours,
John Donnell Smith

over

St. Augustine Hotel,

E. E. VAILL, PROPRIETOR.

St. Augustine, Fla., [illegible] 18[illegible].

M^r Geo. E. Davenport,

Boston.

Dear Sir:

I presume my letter from Cedar Keys has reached you. I have forwarded to Prof. Eaton a large package, containing [illegible] of my collection of Asplenium firmum, A. serrulatum, Lorinseria texana? Pteris cretica? Polypodium pectinatum; L. plumula; also a quantity of Asplenium ebeneum? A. dentatum? and A. trichomanes?

I have requested M^r Eaton, after examining the specimens, taking out such as he may desire, to forward the package to you. I have taken out for yourself and for M^r Shockley anything and everything, that you or he may desire, and then return remainder to me 75 Park St. Bosto. I write to M^r Shockley that he may expect this to receive from you what he may

care to have.

I have thought a fine time to send the whole collection of the Ferns, which ... to be put now objects of interest, for examination by yourself and Prof. Lester. In this way these plants can be studied in ... to you of your ... whenever you like if you have yourself collected them. I did the ... I could to regard Adiantum ... But it was too early in the season for finding their young fronds, either more grown, or fruited, the fronds of last year ... with which I know you, that they attain a large size & perfect.

I shall be gratified to hear from you & see on reaching Balto that you are prosperous & well & ...

very truly yrs,
Wm. Saunders Jr.

Bot. Dept. Univ. Minn. Jan. 14.

Dear Sir:

I have marked with red on the enclosed list such ferns as I already have specimens of in my Herbarium. I shall be gratified to receive anything from you, that will serve to make my collection more complete.

"Cedar Point" is the name of the locality in Sumter Co. where one of my specimens were found.

Mr. Eaton speaks of three ferns found in my package, belonging to a variety (proliferum - new.) of A. pinnatum ebeneum; and he said he had sent one of them to me.

If you think it worth while to examine further some sets of A. ebeneum, that were sent to you; or to look over some addi-

tional Lots of what I can spare of all A. trichomanes, — I will gladly send them all to you. But my own opinion is, that it is not worth while to go through them.

Are you getting good specimens of X. ceratiacea? I took a few from Florida. Just the ordinary fruit, and seem to agree with Chapman's descriptions.

Yrs. truly,

Allen Rogers Jones.

two seasons; and yet I cannot
believe none others are to me but
what six feet would reveal. I
do not expect [illegible] of [illegible]
any species of that genus
[illegible] for most [illegible]
Aster glaucus, cordifolius.

I know that you admire the
specimens of the variety Spectabilis
of Boltonia asteroides. I do not like
mine except B. Virginicum; and
I hardly think you care for it.
But let me know if I can serve
you in any respect with my collec-
tions. I expect to stay here until
the middle of October, and it is
agreeable to me to know of such
objects in view during my walks.

In regard to my error in naming
Polygonum sanguineum, var. glaucum, I have
to admit carelessness; but I should like
to see the species from which I misdetermined it.

Yours truly,
John Donnell Smith

Oakland Garrett Co. Md.
Sept. 1st 1879.

Geo. E. Davenport. Esq.
Boston.

My dear Sir:

I have received and sent to me from Kansas the additional specimens of the Platypectinus that I communicated last April to you and Mr. Eaton under the name of P. pectinatum. These additional specimens are taken in July from the same spot as mine were in April March.

I sent some of the July ones to Mr. Eaton, and he writes me, that he sees it is P. pectinatum: and that the best distinction he knows is in the general shape of the front, much narrower in pectinatum than in platynotum.

I mail to you also some of these July specs: they are larger, darker colored, and better printed than the others. I hope you may find some better character for distinguishing it.

As growing plants, at least, I

1. [illegible] Lake Arbuckle, Sumter Co. Fla.
July :79.
2. Cheat River Valley, Preston Co. W. Va. Aug. 13:79.
3. Garrett Co. Md. Aug :79.
4. " " July 30:79.
5. Cheat River Valley, Preston Co. W. Va. Aug. 13:79.
6. Garrett Co. Md. Aug :79.
7. Cheat River Valley, Preston Co. W. Va. Aug. 13:79.
8. Cranberry Summit, Preston Co. W. Va. Aug. 27:79.
9. Garrett Co. Md. June 26:79.
10. " " June 25:79.
11. " " June 26:79.
12. " " July 5:79.
13. " " June 26:79.
14. " " June 26:79.
15. Preston Co. W. Va. July 7:79.
16. Garrett Co. July :79.
17. " " July 2:79.
18 " " July 1:79.
19. " " July :79.
20. " " July :79.
21. " " July :79

was impressed with its distinctness ~~from~~ in habit, if not in character. Besides, the *L. plumula* collected by Mr. Faxon, Miss Reynolds, and myself was always epiphytal; but both Dr. Garber and I found our *L. pectinatum* as a terrestrial, and only where clay was mixed with the soil.

I have added to the package some common ferns from the environs of this place, hoping they may be worthy to represent in the Davenport Herbarium my summer residence for the past ten years.

Yours very truly

John Donnell Smith

[illegible] Mass. [illegible] Dec.

Oct. 13th 1871.

My dear Sir:

I have sent off to town my specs. of the Florida Polygonella and in a few days I shall myself return. I will then endeavor to distinguish the two species with me and of the characters you have given in your favour of 1st.

I believe I stated, that all these specs both the Marsh and the Polygonella, grew in juxta position and under similar conditions: hence if differences exist among the plants, they cannot constitute different species, but are mere varieties, as Prof. Eaton seems in his note in the Bulletin to view them.

Referring to the matter of Haven, and writing only from my recollection of specimens of the two species given me by Miss Reynolds, as well as of those collected by me,

[illegible] the texture of the cellular tissue and fibrous facility with each. Have you compared the cellular and the fibrous framework? I have no facility in manipulating such things for examination under high powers of the microscope. I would expect from such an examination an explanation of why the frond of L. pectinatum is comparatively soft & succulent and that of L. plumula hard, dry & coriaceous; the former in drying inclines to wilt, wither, & dry up and decompose, while the other does not change its colour & tends to become more yellow, and preserves its structure; the first is not materially diminished as it loses its moisture, the other is singularly so as regards both main rachis and pinnae. Perhaps the latter plant has a different epidermis adapting it to endure the dryness of an epiphytic position.

As to any [illegible] you have already considered their apparent differences in Habit, which have been already pointed out by my Assistants' notes in the Bulletin. You must not suppose from my again alluding to them, that I consider them as any certain criteria for determining these plants.

Very truly yours,
Wm Lauder Lindsay

H

[illegible]
Dear Sir
[illegible]
Boston.

I am glad to be able to contribute another item to the Harvard Herbarium. I have today mailed to you some specimens.

The first on the list is the most interesting result of my last trip & collecting in Florida, new to it.

The Pendula to Torr. & A. will give it as Hypericum centrosinum, will it, with a ? But the enclosed label shows Prof. Eaton's later and more particular identification of it. He sent it to Kew and it? Baker found it nearest to H. exsuccum, Bourdier, Var. majus.

Before sending it to Mr. Eaton I tried in vain to connect it with anything in Species Hilicum or in Synopsis Hilicum, or with any specimen in Herbarium U. S. D. A. Washington. I described it to Prof. Eaton as H. sp. under the name of H. tanypus, one of the special peculiarities claimed being the "brick-dust" re-

-dianly anceipital with a lobed 1"-2" wide protrusion of parenchyma. But this character, like the aërohoria at base beneath of insertion of pinnæ, does not appear well in the dried plants.

It is a fern of very elegant appearance. The caudex is erect, partially above ground, very thick with aerial roots and persistent dead stalks. This with the palm-like head of almost stalkless spreading fronds, gives to this plant, more than any other extra-tropical N. A. species, a resemblance with the tree-ferns.

I enclose a list of my Desiderata in ferns. If it is in your power without inconvenience to supply any, I shall be very grateful.

I send also a Polypodium pectinatum from the Peace Creek region, and Pteris serrulata from Charleston.

Yours very truly,
John Donnell Smith

A. confertinervium var. strigosum D C Eaton

Hab. Hundred-Pound-Hammock draining into Peace Creek, near Fort Meade, Polk Co., Florida, March 1887.

"The trunk-like caudex, and the palm-like head of almost stalkless fronds give to this species some resemblance to the tree ferns"

J. Donnell Smith.

Board $2 per Day.
$10 per Week,
$30 per Month, 4 Weeks.

PERFECT EXEMPTION from HAY FEVER.

ADDRESS,
From June 1st to November,
CLOUDLAND, Mitchell County,
North Carolina.
From November to June 1st,
CHATTANOOGA, TENN.
DAILY MAILS.

Cloudland Hotel,

TOP OF ROAN MOUNTAIN

6,367 FEET ABOVE THE SEA.

L. B. SEARLE, Proprietor.

July 21st 1882.

Geo. B. Davenport, Esq.

Boston.

Dear Sir:

I rejoice to learn from your Postal of 7th, that you have not forgotten my dedicatory in Ferns. May I ask you to forward the package at your convenience to me at Dutton, Garrett Co. Md. Any time before May 15th will do.

I am wondering whether you will care to receive any of the Plants I am now collecting, or that I may find in the valley of the French Broad River. I shall go there in a few days.

I have a pair of tourists pigeons

from cavernous limestone cliffs, [illegible]
East Tennessee; and doubtless [illegible]
-mentora will occur in the Iveson Bros.

I had the good fortune to find quite a
company of Botanists assembled on the
Mountain; Profs Porter, Meehan, Smith-
-ing, and Dr Leidy of Phila

About ten specimens of Linum Grandi
have been found up to this time, four
of which I was lucky enough to find
with. I have kept only two of them and
given the others to Prof. Chickering for
sets of Mt Roan plants, which he
to distribute.

But I have specd for distribution of the
following:

Hypericum Drummondii. Potentilla Tridentata.
Oldenia acuminata. Saxifraga [illegible].
Heuchera Villosa. " virens.
Leucothoë Catesbaei. " Curtisii.
" recurva. Vaccinium [illegible].
Galax [illegible]. " [illegible].

Board $2 per Day.
$10 per Week,
$30 per Month, 4 Weeks.

PERFECT EXEMPTION from HAY FEVER.

ADDRESS,
From June 1st to November,
CLOUDLAND, Mitchell County,
North Carolina.
From November to June 1st,
CHATTANOOGA, TENN.
DAILY MAILS.

Cloudland Hotel,

TOP OF ROAN MOUNTAIN

6,367 FEET ABOVE THE SEA.

L. B. SEARLE, Proprietor.

188

Cirsium foliosum. Liatris squarrosum.

Senecio radiatum. Oenothera glauca.

" gemculatum. Cynthia Dandelion, var. mon-
tana.

Lycopodium Selago. Liatris graminifolia.

Sedum Telephoides. Aletris glabra.

" Rhodiola. Arabis hirsuta.

Thalictrum clavatum. Circaea Alpina.

Carex, sp. Silene Virginica.

" Crawei, var. vitilis. Hackys aspera.

" aestivalis. Rudbeckia triloba.

Scirpus caespitosus. //

Agrostis perennans. The above are, so far,

" hiemalis. the only species you

Castanea vulgaris. may care for, as

Solidago puberula. my gathering up

" flexicaulis. to this time; and

" glomerata. it will give me great

pleasure to forward to you on my [illegible]
to Oakland — say about Aug. 1. — any
thing on the above list. Some of
them are however only in fruit &
not in flower.
If this addressed to Oakland will
meantime be forwarded to me.

very truly yours,
John Donnell Smith

we have an Aconitum, that appears on
leaves, and perhaps as to the other char-
-acters, with A. reclinatum; but the
flowers are blue.
Prof. Porter has a new species of Lupine
from the French Broad, which he will call
-ed under the name of L. [illegible].
I hope to meet with it, as he gives
me its particular station.

K

75 Park ave. Balt. Nov. 5th 1881.

Geo. Davenport, Esq,
Medford, Mass.

My dear Sir;

I have not done justice to the Ferns of my State, as you will see from the Report I enclose. Several of this species I have met with in Wood. The limit in West Virginia. I ought to add, that I have collected little in the State except in the Glade region of Garrett Co.

What style of a work on Ferns are you engaged upon. I had not heard of it.

~~I enclose a list of Eaton's of Virginia.~~

I think I sent you in the package a Selaginella under the name of S. rupestris. Prof. Eaton tells me it is S. tortipila, A. Br.

Yours truly,
John Donnell Smith

75 PARK AVE., BALTIMORE, MD.

22 May, 1882

My dear Sir;

It is pleasant to find oneself remembered, and at same time to receive a present. The Hawaii ferns come just at a time, when I am meditating plans for increasing their representation in my Herbarium.

The specimens come without names, except for Botrychium Boreale, B. Lunaria, and Aspidium Oreopteris, I take the others for Cryptogramme acrostichoides, Thelypteris Oreopteris, Cystopteris fragilis, Aspidium Lonchitis, Botrychium ternatum, Ophioglossum

vulgatum. There is one other species of Botrychium that I do not see included. Will you do me the favor to tell me me whether these names are correct, and if so me that of the last one, which has a sterile segment — probably B. matricariaefolium.

I am trying to get one set of your and new species of foreign ferns. I have nothing of that kind at present except Fee's sets, and Buchanan's from Natal, and Baldwin's from Sandwich Isl. Can you suggest to me how I can purchase others?

Yours very sincerely,

H. C. Wood Jr.

Geo. E. Davenport, Esq.,
Boston.

K

75 Park ave. Baltimore,
14 April, 1883.

Mr. Geo. E. Davenport,
Salford, Mass.

My dear Sir:

My recent visit to Florida gave me a chance to collect some ferns, and I enclose the tickets for those that I mail to you today.
You observe among them one, that I am inclined to the belief for the United States, consists so far only in notice in your pamphlet on Dennstaedtia (just received by me). You already with me have entered others to be entered in your coming work.

I am in a fog. Eaton in Hydrocotyle is -tum. Chapman. He says it is his typical form for the species; but he proposes to call it Pu-gopteris. It is also on his authority that I have made the tickets for the two forms of Asplenum myropteron.

very sincerely yours,
John Donnell Smith

South Yarmouth 5/19, 1905

My Dear Mr. Davenport,

I have heard of a vacancy in drawing, in the Hyde dale Schools, and as it is not far from home, Medford and a good salary, I should like the position.

The Supt, school board, high school principal and grammar school principal

have all given me excellent recommendations.

The town will increase my salary to have me stay another year here, but my folks would like to have me near.

As I thought a recommend in regard to character and ability from a person in my own city might carry weight. I have taken the liberty to use your name as a reference, in my letter to Supt Herbert F. Taylor, Hopedale.

I hope it was not presumption on my part, but as you have always been so kind. I thought perhaps you would help me.

I shall be very grateful indeed, Yours sincerely

S. Isabelle Smith

South Yarmouth.

Mass.,

Ann Arbor, Aug. 30. 1881.

Mr. Geo. E. Davenport,
Medford Mass.

Dear Sir:—

I have just read with great interest your letter in the Botanical Gazette in memory of John Williamson. I am ashamed to confess that I do not so much as know where the "Fern Etchings" were published and as I am particularly desirous of obtaining a set for the University library I take the liberty of asking you to put me on the track. Will you be so kind as to give me the desired reference and greatly oblige

Yours very truly
V. M. Spalding

38 Butterfield St.,
Lowell, Mass.,
Apr. 14, 1897.

Geo. E. Davenport, Esq.,
8 Hamilton Place,
Boston, Mass.,

Dear Sir:-

I infer from the conversation we had today that you may find opportunity to speak to some of your botanical friends about my collection of Japanese ferns & so I beg leave to enclose a list of the same. I neither ask nor expect you to make an effort in this line, but if casual opportunities arise to call attention to the collection, I shall be pleased to have you do so. I hope to have the pleasure soon of looking over

the collection you presented to
the Horticultural Society.

Sincerely yours,
Arthur W. Stanford.

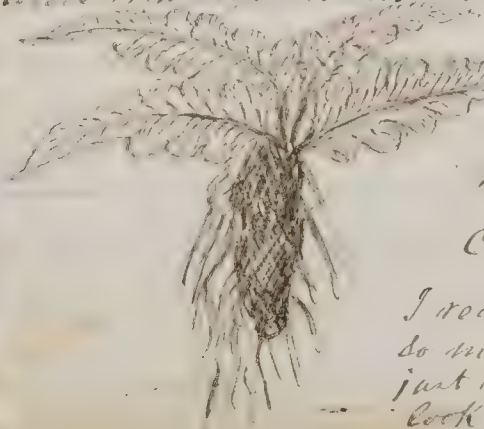
Lancaster Pa Dec: 22d 1873

Geo. E. Davenport.

Dear Sir

Yours of Decr — inst. came to hand, always ready to respond, I have deferred answering, with the hope of sending you specimens. I find I have only a single specimen out of three or four collected at the time I sent one to Prof. A. Gray — and have not since met with the same form of Camptosorus rhizophorus. Nor have I been in the locality — where originally found, in 15 years —

I have a single fibrous root stalk, with perfect (corm-like) fronds of the Asplenium ebenoides (R. R. et al) found on soap-stone rocks, West Side Mount Holly Rail Road above Manayunk Pa. It is a fine specimen



— Dr Gray does not mention this species I find it is No. 719 in Mann's Catalogue — Ed. 1868.

I really regret that I have so many irons in the fire just now, that I can not look over my duplicates not duly assorted — I really do not know what I have — Yours Very Respt.

Jacob Strauss.

235 East Strawberry St.

Shave. refer to Mann's Catalogue

Equisetum. Nos. 3647. 49. 50. 51. 52 – 57. 58 & 3659.
Polypodium. 3662. 65. 69.
Cheilanthes 3684. 87.
Pellaea. — 3692. 95.
Pteris. — 3705.
Adiantum. 3706.
Vittaria 3710.
Woodwardia. 3714. 3715
Scolopendrium 3716 — Camptosorus 3717.
Asplenium 3718. 19. 20. 21. 25. 26. 29. 30. 31.
Phegopteris 3732. 33. 34
Aspidium 3738. 41. 42. 44. 45. 46. 47. 51.
Struthiopteris 3753.
Onoclea — 3754.
Cystopteris. 55. 56
Woodsia — 58 – 3760. 63
Dicksonia 3765
Selaginella — 3768
Lygodium — 3771
Osmunda 72. 73. 74
Botrychium 78. 3780
Ophioglossum 3781

Lycopodiaceae

Lycopodium — 3784. 85. 87 88, 89 90. 91. 92, 93
Selaginella — 3795. 96. 99
Isoetes 3806, 7, 8. & Var. 9. 10. 11. 12

Hydrocharitaceae

Anacharis 3818
Najas 3824 — & Ex otics Some
Nearly [illegible] were [illegible] sent
I may have [illegible] Shave
[illegible]

J. STAUFFER,

SOLICITOR OF

United States, Canadian, or European Patents,

REGISTRY OF TRADE-MARKS AND COPYRIGHTS,
FILLING ASSIGNMENTS, &c.

Office, No. 235 East Orange Street,

Lancaster, Pa., March 1st 1871

Gen. E. Norton Esq.,

Sir:

I received your kind note in which you ask me to write a few words in relation to the Patent Office. I have not seen it just now, as I am absent from home, but may say that I do not think it will be to my interest to write anything about it. I have had a letter from Mr. Robinson in which he says that he has written you, and I suppose you have received it. I am sorry that I did not write to you before, but I have been very busy. I hope you will excuse me for not writing sooner. I am very glad to hear that you are well and that you are enjoying yourself. I am sorry that I did not write to you before, but I have been very busy. I hope you will excuse me for not writing sooner. I am very glad to hear that you are well and that you are enjoying yourself.

Since writing the within a Patent Office bill on the market, from which down pleasant Morning fish. This occurs in a closed situation as near as one can. Philadelphia Baltimore Pittsburgh and all other points of the Coast, Atlantic cities have only little at the Office of the Coast, Atlantic cities. Just all and other points in the grand or regular routes to the Atlantic & the Government Agent (or Office etc.) The rates are very low indeed. I remain a friend of yours truly, J. Stauffer. P.S. Yours etc. I am glad to hear that you are well and that you are enjoying yourself. I am sorry that I did not write to you before, but I have been very busy. I hope you will excuse me for not writing sooner. I am very glad to hear that you are well and that you are enjoying yourself.

the Illustrations would convey fully the idea that I would furnish an illustration of any known plant – At least limited the country I find

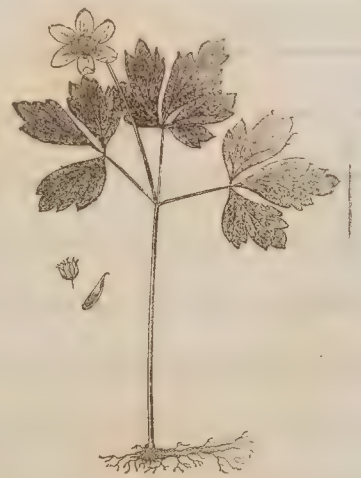
Botanizing I have been an active Student of Botany since 1827 when 21 years of age. There is much to learn even of our own plants, I am now interested with the Microscope and the Fresh water Algae. I came out yesterday and found some which corresponds with the genus Mastigonema Schiede Woods New species, M. fertile, found on a stagnant pool on the city Commons, forming a filamentous, jelly mass, This is a new field or Mine to work and brings us in contact with the simpler vegetable forms – the Zoospores that link it with the Animal Kingdom –

I will be heard enough to. Now I am sure I do not want the Specimen – Hope to hear from you soon

Yours very Truly

Theo. Stauffer

At 70 years of Age we feel like giving up active field work – Two weeks ago I made a Pen drawing on Bristol board and sent it to Philadelphia – from which I had a Photo-Electrotype made – representing the Wood Anemone – of which I will furnish a hand impression – The cut is the same as the stereotype taken from the cast of a wood engraving. It hardly takes a half an hour to make the drawing, the Manufacturer that the finish of type cost me only $1.50. I did this by way of an experiment



Anemone nemorosa L.
Wood Anemone. Spring

They offer to furnish such cuts $1. each if I furnish 20 drawings in a batch – of different plants of course but 2000 of these cuts cost $2000. to illustrate a flora of the U.S. alone. Alas! it takes a life time to get ready – then – we go where flowers ever bloom and leave these of earth behind – hardly with regret – if our faith has been fixed, that the Summer Land after all is – The alternative of our existing – if we but feel to enjoy – purity, truth and all the moral graces – so inspired – with the Love of God – here or not – This may seem strange talk, and excite your suspicions that I am an old Communist – I am Yours Very Truly Theo. Stauffer

138 Montague St.
Brooklyn
April 1st, 1864

Geo. E. Davenport.

Dear Sir;

Please
accept my thanks for
the supplement and bill
of U.S. Jerne which
were duly received. I am

6

under the impression that I failed to enclose a stamp to him I wrote to you, and with your permission will do so now. Thank you also for the information in regard to Cabot's Catalogue.

Yours truly

Nina O. Hale

TORREY BOTANICAL CLUB

COLUMBIA COLLEGE

49TH STREET AND FOURTH AVENUE

K

NEW YORK, Oct. 15 1886

George E. Davenport,

Medford,

Mass.,

Dear Sir,

At its last regular meeting held Oct. 12, 1886, the Torrey Botanical Club elected you one of its Corresponding Members. I take great pleasure in announcing the fact to you —

Very truly,

Marcia O. Steele

Corr. Sec'y.

128 Montague St.,

Brooklyn, N.Y.

K

No 3352, Indiana Ave
Chicago February 5th/82

Mr Davenport-

Dear Sir

The name of the fern is "Aspidium aculeatum" var proliferum supposed heretofore, to be strictly, a conservatory fern. I sent the fern to Prof Eaton as he returned me the above statement. I then sent it back to California to the lady from whome it came & she returns it saying it was very common in San Diego and called in San Francisco the San Diego fern. Mrs Kents letter I dispatched to Prof Eaton who again sent for the fern saying one spec. Subsequently he wrote it up for "Torrey Club Bulletin" Mrs Kent writes thus about it "I find the fern you sent me is one of the native ferns found very abundant in the south part of California and commonly called San Diego fern" I am glad to oblige you thus far. My address is at the head of letter

Sincerely Mrs Leander Stone

57 East 54th St.

New York, Sept 16th 1895.

Mrs Leo. E. Crumpton

Seattle

I have to acknowledge your great kindness in sending to assist me with the keep of my dear Father William Hunt. Since this check a package arrived for him from Scotland, & [illegible] [illegible] [illegible]

this upon hand his decision to
solve this vexed question of the
Chihuahua. I venture to forward
them, per Adams Express to you
for your examination and opinion.

The Parish wrote - "The time
we have taken has enabled us to
get you a better assortment of the
doubtful Ch. corniophylla than we
could otherwise have sent. Two or
three forms, taken from Hot Springs
and from Utah near St. Louis
Mo. appeared too much to be like
candii, - as a single specimen
from the latter place has quite a
peculiar appearance. He would
be glad to know your reflections.

If you will kindly examine
them at your leisure, and return
them to me, with your opinion
of them. I shall be grateful
to you. I am quite ignorant of
this subject, and do not like to
add them to his herbarium, without
being assured that they are properly
named.

Yours respectfully
Asa Gray.

57 East 57th St.

New York, Aug 21st 1881

Wm L. C. Swayne Esq.

Dear Sir

I regret to hear that you are not in your usual health. I hope that you will delay the examination of the pens until you have recovered your strength. — It has occurred to me that you might like to add some of the specimens to your collection — and if you think that any of them would increase its value I hope you will retain them for it. — I think it would have been a pleasure to any

better to share them with you,—
and I shall happily do so in
his stead.

Yours respectfully
Anna L. Root.

Could you kindly send me a catalogue of your collection of subscription books.

I should be very glad if you could assist me in my literary work. I thank you for your kind offer of help in this matter.

I shall be much indebted if you can inform me how I can obtain your valuable assistance.

Yours obediently

[illegible]

[illegible]
Newark, New Jersey.

Dear Sir

Your letter and the package of pictures received. I am very much obliged for your opinion and courtesy in your endeavor to help me. Kindly send me the bill of the pictures. I shall be very glad to pay for them.

The agent you speak of was left by some oversight. I did not see him and he did not write me. I suppose he received no encouragement. The specimens must have given him so much pleasure. I was of course aware of the difference of opinion between

Prof. Eaton & yourself in regard to what my brother called L. [illegible] and I am not mistaken, he thought that you differed more widely from each other than from him. He said if he could procure plants justifying it he should send them to Kew for examination then. Lately he had been anxious to get some plants from Lake Co. Ind. - and had written Mr Cleveland in regard to them; he thought if we had any true C. amygdaloides it would be found there. At the beginning of his fatal illness a note from a friend brought him a few fronds from a plant sent from San Rafael Cal. as C. gracilima, and grown in Stamford Conn. he examined it and thought it was it. - Asa Gray asked for it too. - and it was decided with the intention of asking for the rest if the plant died. - as seemed likely it would - - it was his last fern work. - It did not occur to me to send the fronds with the Parish coll. but will enclose them now. - as you may like to see them.

Would a root - if I can - & flourish, - be of any service to you? - my brother cut up a plant some years since, - and I think I may be able to find you a specimen - or failing that - I can

F. Lockyer Esq
New York, Feb 17th 1872

Dear Davenport

Please accept my thanks for your kind and interesting letter of Feb 16th; it should have been acknowledged immediately on its receipt; but that I have been very busily occupied with farm work.

After what passed from time to time between us, I expected to receive from you Mr Sedgwick, generally fine specimens, but all unnamed; Dr Veitch from New Caledonia, with species from Fiji, Caledonia,

Cape of Good Hope, not included,
7 of species, - Many unknown;
some very fine specimens & some
the rarest shells. It has taken
considerable time to look over
and check them, - and I am
now busy preparing a package
to be sent in exchange.

I am glad to know that
you & Triple-thinks of collecting
in species; I hope it may be
a very successful time, and that
you may receive a full species
of Helicidae (to enable you
to complete your study of the
species. - The variation in the

colour of shells is very great
different appearance at times. -
otherwise the shells seem
an unchanging type. - I shall
be very glad when I can have
a chance -

Yours respectfully
L. A. Lewis.

Please let me know if you wish
to see the American Press.

Yours respectfully

Anna H. Dickinson.

57 East 34th St.

New York, Dec 3d 1872.

My dear Sir

Your card was duly
received. I am thanks for your
kind offer of assistance in making
up depositions in our behalf.
Our correspondent called for the papers
yesterday, and I understand
sent them, the package was large.
If I should come across anything
I shall be glad to apply to you.
But I doubt if I shall ever be
called upon for a deposition.

The depositions you ask for are
not in the New York Herald
I have referred to from Tuesday's
and also the Tribune of Monday

to Shakespeare's last collection. I have scarcely glanced at yesterday but I should estimate it more if I thought it contained the finds you wish for. The last lot of finds of Lepidoptera circulated as Lepidoptera from Somaliland that I will be happy to send you for examination if you would like to see them. I think there is a fair representation of the latter but I recollect that many of Collet's correspondents proposed sending him a couple of pounds of it. I am preparing a package for him which adds to a collection. I will ask for a special collection of those flies of L. Lepidoptera if you wish it. I believe that I finish my exchanging there is a package due from India which I fortunate will be sent to me in due time. I shall keep my bottle flies to count for example. Distance about was supplied with his correspondence by chance, & the activity of his flies, and the accumulation has become very great and very awkward. I shall be glad if I am able to get them in order. It seems to me a wearing years, but I believe when it is done the collection will be our valuable, and that I ought to be able to find some institution where it would be welcomed.

this spring. I will be glad to see specimens before packing the ferns so that I can send you them readily at any time you wish for them. I should like to have you see the ferns, and if you are in the city at any time I shall be happy to show them to you.

I saw a note of Mr Simmons in the "Botanical Gazette" in which he mentions discovering a canon full of rare ferns, - a new Cheilanthes, & some doubtful ferns, - which he had referred to Prof. Eaton for determination, besides A. pinnatifidum, - which seems like a new

species to me. I have seen nothing further in regard to his collections. I was more interested in some note in regard to Bill Williams mountain. I mean - I hope some one will collect there; it would supply so many missing species.

I know that my brother Richard has a painting of a certain mountain - I guess to my brother William's - but I had no idea that any one was at all interested in it, & I am glad of it. I should like to see it myself.

I hope Prof. Eaton will complete his work, - and I should be very glad if he would added the response to it, I think I heard

if he wishes any plants established
in the Botanic Gardens. — I hope you
may find a correspondent to take
Poor Young's place. — You must
regret her death very much. —
I shall write to Jamaica by the
next Steamer. —

Many thanks for the Resumés
that which I return.

Yours respectfully
J. D. Hooker.

57 Ecc[illegible]

[illegible] Oct. 3rd 1883.

Dear Sargent

I am particularly glad
you are going to write the Life —
and for your kind offer to [illegible]
you — for one number [illegible]
I shall not endeavour to make any
thing in our collection profitable —
We must think it advisable to get
our accumulations published — what
is at in my hands is still very
imperfect, and my health makes
me doubt whether I shall ever
be fit enough to work [illegible]
more. But I would like one [illegible]
more if anything new, or that is

missing in our collection. And if you will be so kind as to order for me one specimen of each of the following species I will be specially indebted to you.

Sch. hügi cosmotypis
Phil. marginata
" tenuifrons
Reg. affinis — from Mr P.
Lepid. sativa. (omit & set from Paris or E&P)
" juglandifolium

I should like to ask you if it differs from Mr. Ridley's plant — which my brother thought. Veitchii — S. cordata — the cultivated R. fragrosa is much more fragrant, & agrees more nearly with the original description.

I have not asked for the new species of the late Prof. Eaton from various quarters, — it is evident to me that something more is known of them than appears in the descriptions.

I shall be extremely glad of your opinion upon this point, and should be much obliged if you will kindly assist in adding our list to yours & Bentham's. — Please send to it those species, if any, which you think we should have.

I hope he may find some time to look at specimens you send. He would collect more carefully in his own garden

the typing of the ferns is concerned there will be nothing wrong. - I have done it with cultivated ferns so as to satisfy any brother, - who preferred that manner of recording.

Thanking you again for your great kindness - I remain -

Yours respectfully

A. A. Eaton.

1

5, Eastfield Rd.

Forest Gate, E.

Dear Dawson -

Please accept my thanks for your great kindness in ordering for me; - certainly, I ought to have these ferns, - and consider it to have a great appreciation of them. The news that the Lime Ch. myriophylla - is probably found has a peculiar interest for my brothers & myself, it will be a satisfaction to us if any brother's judgement is confirmed. - I should think, if the plant proves what you take it - to be, that Prof. Eaton can hardly withhold his assent to this floration from our Hebrides.

I shall be glad to have the ferns from Mr. Linville; I think that he must have forgotten that I was to have expected a special collection from him, - he often spoke of him and his work, - wondering that he did not hear from him, - and at last, I believe, concluded that he had not done well with ferns.

Will you be kind enough to give me your opinion about the drawing of any ferns; - I see that Keene advertises a Sanitarium ticket, which I do not incline to; - I do not know what was Mr. Linville's intention was about it, - but I know that he was exceedingly particular about dates, location, collector, &c. when received; I think too, that when the peculiarities of location are given, he would wish them added. - For myself, when there is a good flat ticket, like the Canada's, - I would like to use it; but many must necessarily be written, - either on the sheet or ticket. Then sometimes there will be two localities with different collectors on the same sheet; - and two tickets seem inconvenient. - I think you do not use tickets; but I should like to be positive about it. - I want to do my work in the best manner. - and I think so far as

[illegible]

[illegible] Oct 21st 1885.

[illegible]

[illegible] you.

[illegible] for explaining to me your method of [illegible] your specimens. Since I wrote you last I have found one of your Herbarium labels filled up in the [illegible] which I think I could do [illegible] in filling up the labels. I shall try to have completed a labelling single specimens. I have an occasional Herb. label. I have than that is out of my power. [illegible] not the knowledge that would [illegible]

package from Field Bros. and I could not make anything from it. I shall be absent from home for a short time - if you receive the pens ordered for me please do not send them for a few days. - then if you will kindly express them to me. - I shall owe you a little account of our indebtedness to you. I shall be greatly obliged, -

Thanking you again for all favors shown to me. - I remain

Yours respectfully

J. A. Lloyd.

you in sending notes to the theatre; but if I should be any time, find a note in my pocket's writing I should of course give it; and substituting the cards and the tickets.

I remember his expression of satisfaction in the arrangement of your Entertainment, and his enjoyment in his visit to Boston. He had proposed a similar arrangement for his own, - but the purchase of a large collection of Indian Relics which were already promised, made it undesirable to mount them in the same manner. -

I send you by mail a little package containing an Ephemeris

a star which you doubtless don't find; - and some curious woodpeople of Rapid Arrowhawks that he "got with tickets, & sticks & things" - will you please tell me what you think of them - & whether they with the pens you so kindly ordered for me, when they shall arrive. I hope that Mr Gannon will send you all the particulars you wish for, to enable you to complete your paper to your satisfaction. - I shall be very desirous of seeing it. - If you should wish for any Gems from me, please ask for them. - I spend the

5th East 9th st
New York, March 5th 1882.

Jim Jacomb

Your letting of the 1st inst.
was duly received. — I thank you for
the valuable information in regard
to the manning of our crew pens. —
I have designed writing until I could
announce the shipment of the
packages proposed sending to you.
that I sent for Adams & Sons this
morning, & hope it may reach you
safely. — It contained the specimens
from Parish that you wished to
examine, — and some coal from
J. L. Fontaineau & Son. Epigueum. —
I am sorry that I could not send

you a better specimen, but I found but one plant of Sedum in the collection; and that is not as ill like the illustration in "British Flora" - but the ticket had my brother's check mark on it; - the loose fronds are from the plant I mention. - If you would like to see them I can send you all the specimens of Sedum & fontanum to examine, - but I think you can form a good idea from the scraps sent you of the plant here. - In putting up the duplicates I have not chopped to consider how it is to be done of them may be, - but have left you to judge whether you can use them. - I enclosed a list of a Liverpool lady asking for a name for it, - is it a Compilation? - Am I mistaken in thinking that specimens will be of use to you? - Perhaps I should have asked before sending them.

Yours respectfully

J. A. Clark.

Send me a line when you arrive in the Saint John, and also after floods of disturbance from this visit, if you can. I feel interested to hear of little Jo, for whom I sympathize both deeply. But I was interrupted while I was busy with the packages, and I think that must account for the blunders. I believe that I have everything else, and am sorry to trouble you about these. I am in no hurry for them, and time will answer ... as I shall, comfortably, though all plans and fancy come, in months, and my deficiencies can be made up just then.

Yours respectfully

N. Hawthorne.

[illegible]

[illegible] 8th April 1883.

[illegible] your

Thanks for your kind
letter and for the pamphlet received
this week. I am glad to know
that you [illegible] have accepted
the [illegible] and thank
you for remembering my interest in
it. And also for crediting me for
with the recognition of the printing
the supplement to your Catalogue -
which I am very anxious to see - I
have been using the Catalogue quite
frequently as a reference book & have
been busy with the plans. Complaints
[illegible] &c. and have [illegible]

accordingly communicate. I sent one circular
and package to New Caledonia. I have
half a dozen remaining. I think I
should have a copy of the supplement
for each. If you will kindly send
me eight copies when ready
I shall be much obliged to you. I
should also like a dozen copies of the
Check list when it is published. It
seems to be greatly needed. I am
very glad that Capt. Smith was
successful in Florida. But every new
discovery increases the number of
desiderata. Has Calotis hookeriana
California? Does it extend into
N. Lusitania? Is your Senecio plant
the true Candida? Thanking you

once more for all your kindness.

I remain

Yours respectfully

T. A. Sloan.

New Brunswick, N. J.

February 2 1885.

57 East 34th St.

New York, May 4th 1883.

Mr Thompson

I returned home yesterday afternoon, & mailed the specimen of L. tomentosa to you this morning. -- I hope that it was what you expected -- if you should need more of it I can gladly send it to you. -- and will be happy to send it to you.

I have received light. I Donald Smith's form, -- & have written thanking him for it. -- I am greatly obliged to you for drawing me to him. --

-- I feel his kindness the more that I do not find his address on the list of correspondents which you

summer. — which I had supposed was complete; — I regret it very much. — as the intercourse with him was very pleasant, & my sister enjoyed it, & was much gratified with the magnificent specimen of A. contortrix sent him. If I had known of the omission when I was writing this morning I should have apologized to him for it. — Thanking you again for all your kindness. — I remain

Yours respectfully

Anna H. Stout.

Ex. Herb. William Stout, New York.

.....

.....

.....

.....

.....

Hab. .....

.....

Legit .....

57 East 34th St.
New York, June 16th 1883.

Dr Davenport

You will please excuse my delay in acknowledging the receipt of your kind letter & package. — I have not been ordinarily well the last few days, & was not equal to writing you until this morning. I am very much obliged to you for all your kindness, & thank you for the valuable contribution to the Herbarium, & the photographs. I had been wishing for as they were so accurately represented —

I am very glad to see the new Chilian ones. — & hope that Dr Pringle will have a very successful trip this summer. —

& Lycopods to name. — I should like very much to show them to you, & have the benefit of your criticisms. Though it is a little late for much good to result now. — Still, — if there are any errors, — I should be very glad to correct them.

I enclose the amount I believe due for the Supplement & Check Lists. — I am much pleased with the latter, and am curious to know if Prof. Eaton accepts the changes made in varieties & species.

I suppose you will hear from Mr Baker something about N. California. — I should like to be sure that he rejects it before ticketing my specimens. — Though I presume from his letter to you that he will reject it. —

Yours respectfully
E. L. Sterling.

I find myself regretting that he failed to send the special collection that my brother expected, and am tempted to write him now if you think I am likely to miss his large form of P. Scouleri, – which seems almost as desirable to me as a new fern; – I hope to get a plant from him, but should prefer waiting until he has made his summer collection, if I can do so safely. –

I am very glad of the notes in your Supplement. I had been wishing for them while I was busy with the Pothologeras. – I have lately finished A. decalbata, – & wrote under Rusby's A. Mex. specimens "variety", – not "the type"; – I found one of them had been called A. nivea, – & the name crossed, & the note added; – there is only a scrap of A. nivea, – collected by Lemmon in Arizona in 1880. & received from Mrs. Eaton. – it has very large pinnules, & does not greatly resemble any of the specimens of A. decalbata. – I shall be very glad to know what you make of that Cheilanthes; – my brother would have said that he was not entitled to the best specimen; – I hope that I have kept a good one for yourself. – Would you like anything from the Parish Collection of Cheilanthes for Kew? you know how well I can spare it, – & that I will send it you gladly. – My fern work comes on slowly, – I have 375 species mounted, – & I have still one – Cheilanthes

5 Clinton Place

New York, June 6th 1883.

Dear Mr. Gray.

I have been intending to write & thank you for your kind letter and the beautiful little plant of Ch. Pringlei inclosed. I wish I was only glad to have what I have not seen & like to do so much more. I am disappointed at Mr. Pringle's not coming to see me. I noticed the omission of Coulter's first name, but it never occurred to me that you understand that Mr. Pringle would like to have the benefit of his discoveries. I think that his new journey would take him to Arcadia Cañon. I think I feel more hopeless in regard to the plants from that-

location than from any other. I shall write to Mr Pringle as you advise. I would like to know if there is anything in his collection respecting Mr Hunt's discoveries as to make it desirable for me to add it to my lectures.

I shall be very glad to know what you make of the Ark. When you complete your paper, if you wish for any items from me please ask for them. I will gladly lend you anything that I have. My letters to you are all blanks, blanks. I wish I were much that I could do something in return for all your kindness to me.

Yours affectionately Anna A. Gould.

57 East 34th St.

New York, Nov. 14th 1883.

K

Mr Davenport

I received a letter a fortnight since from Mr S. Hart announcing the shipment of a package of ferns from Jamaica W. I. I think it should be here very soon. The list enclosed in the letter is a very unsatisfactory one. I regret to say that he has not included the "Asplenium Cicutarium" & Gymnogramma Ellemanii that I asked for for you. He speaks of sending "sections" of their cane of A. Schizophyllum. I presume he intended to write fronds.

friends may work for it. - do you know of any one who would be likely to want it? My own fern work stopped when I left home early in Sept. - & since my return my Mother's very alarming illness has prevented my resuming it. She is improving now. - but her recovery will necessarily be very slow. - & it will be months before I shall be able to take it up again.

I enclose a bit of A. aquilina from Lake Mohonk, N. Y. - is it often found with such an involucre? -

Yours respectfully

Anna A. Slosson

I asked for these ferns particularly, explaining that I wanted them for your study. - & I am sorry that he should have been so careless. - but he seems to have had some difficulty in making up his package. - has sent duplicates of very common ferns, - & cultivated duplicates of others: - but he promises if he receives anything new or rare to remember me, & if it can be sent by mail to forward it. - as he feels rather indebted to me; - and he asks for a frond or two of fresh Lygodium palmatum, - if I have it, as he wishes to keep and grow it. I cannot furnish it myself: & thought perhaps you might have a scrap to spare that had been gathered recently. I think it best to send it, if possible, I propose to write on the receipt of the package & remind him of his neglect of my desiderata, & to offer to pay the charges on anything he may have for me that may be too large for mailing. - I have some fronds of A. cicutarium from Jamaica that I can send you when I send the A. Chiapophyllum - if you care to see them.

Dr Hart mentions a new work on Jamaica Ferns by Dr Jenman, of which he has seen some proof sheets, & which he thinks will be very valuable to students of Jamaica ferns. - he suggests that some of my duplicates

57 East 34th St.

New York, Jan. 3rd 1884.

Mr. Davenport

Please accept my thanks for the Lygodium spores received. - I am sorry that you should have given yourself any further trouble about them. - & that I failed to write you to that effect. - ill health & many interruptions must be my excuse. - I saw Prof. Eaton's note in regard to the Asplenums. - & thought it must be gratifying to you - as to

one. - I am glad that the fail-
ure of my correspondent to send
the plants promised will
not inconvenience you; - the
more so - as the package has
not arrived; - I have been ob-
liged to write for the shipping
receipt. - I hope I may get it
in time. - I should be sorry
sorry not to receive it. - though
it is a disappointing parcel. -

Thanking you again for your
great kindness - I remain

Yours respectfully

Anna A. Stout.

not collected much. – I enclose a Herb. ticket of your own that I doubted whether with your present opinion about the fern you would care to have mine unaltered. I have labelled all the D. dayi ophyllas from Cala. – Yr. Ivesiæ with an interrogation point, excepting the Cajon Pass, & San Jacinto Mt plants – which are simply Cheilanthes. My brother had marked those two species. – ** I did not add it, doubting as I did whether he would hold done to that opinion. – I enclose a check list that you may see what we have, the number of Chelos. &c. – I hope if you visit New York at any time, you will call. I shall be very happy to see you & show you the ferns. – & should value any suggestions you might make exceedingly –

Yours respectfully Anna L. Slosson.

57 East 34th St.
New York, Jan 28th 1884.

Mrs Davenport

It was with great sympathy for you that I read of your recent trials & sorrows, – and yet how blessed it is to have had such a Mother to remember, and to be able to look forward to a blissful reunion with her in our Father's House. – I trust that this is your happy privilege, without it I do not see how one can live through their losses & sorrows that are appointed us.

My own Mother I am happy to say has so far recovered that she has been able several times to sit at her

own table with her family, — we are very thankful for the dear life spared to us. — and she enjoys everything as one rarely does at her age. —

I trust that your daughter's recovery may be rapid, & that no ill effects of her disease may remain to trouble her.

I am very glad that you are thinking of resuming your fern work. I hope that your book is progressing toward completion. — A friend asked me recently about a work on American Ferns that should be inexpensive & I did not know what to recommend. — I have seen Underwood's (?) advertised but have never seen it; — can you suggest anything to me for her."

Lately I have been doing a little fern work myself; — I added to the Herbarium a few specimens received from Mr. Tingle, & have taken up the Indian ferns again. — I think the American Ferns are finished & ready for revision, — they will want some few notes &c, — & I think I should indicate in some way those that have been added by — — & am uncertain as to the best method of doing it. — I regret now that I did not avail myself of your kind offer to procure for me a — full representation of Mr. Lemmon's new species, — but the magnitude of my task & my own health appalled me, — I lacked the courage, & now I fear my opportunity is lost. — I have seen nothing referring to work done by him this summer, & fancy that he has

Herb. Wm. Stoit
No Skels.

NORTH AMERICAN FERNS.

Check List of the Ferns of the United States of North America, alphabetically arranged for exchanges by Geo. E. Davenport, Medford Mass., U. S. A., April, 1883. Cheilanthes villosa (Catal. Supplement) is omitted as not being yet fully established, and only the more important varieties are given.

Acrostichum aureum, L. 5
Adiantum Capillus-Veneris, L. 10
" emarginatum, Hook. 6
" pedatum, L. 8
" tenerum, Swz. 2
" tricholepis, Fee.
Aspidium acrostichoides, Swz. 4
" aculeatum, Swz. 2
b. var. angulare, Braun 1
d. var. Braunii, Dœll. 5
y. var. scopulinum, Eaton. 2
" Boottii, Tuckm. 2
" conterminum, var. strigosum, Eaton. 3
" cristatum, Swz. 3
b. var. Clintonianum, Eaton. 2
" Filix-mas, Swz. 4
" Floridanum, Eaton. 3
" fragrans, Swz. 3
" Goldieanum, Hook. 4
" juglandifolium, Kze. 1
" Lonchitis, Swz. 3
" marginale, Swz. 3
" Mohrioides, Bory. 1
" munitum, Kaulf. 6
b. var. imbricans, Eaton.
" Nevadense, Eaton. 2
" Noveboracense, Swz. 3
" Oreopteris Swz. 1
" patens, Swz. 6
" rigidum, Swz.
b. var. argutum, Eaton. 9
" spinulosum, Swz. 2
b. var. dilatatum, Hornm. 4
d. var. intermedium, Eaton. 4
" Thelypteris, Swz. 2
" trifoliatum, Swz. 2
" Unitum, var. glabrum, Mett. 3
" ——— sp. ? 1
Asplenium angustifolium, Michx. 3
" Bradleyi, Eaton. 1
" cicutarium, Swz.
" dentatum, L. 2
" ebeneum, Ait. 4
b. var. proliferum, Eaton.
" ebenoides, Scott. 1
" Filix-fœmina, Bernh. 13
b. var. angustum, Eaton.
" firmum, Kze. 2
" Glenniei, Baker. 1
" monanthemum, L. 1
" montanum, Willd. 2
" parvulum, M. & G. 3
" pinnatifidum, Nutt. 1
" rhizophyllum, Kze. 2
b. var. myriophyllum, Mett. 2
" Ruta-muraria, L. 2
" septentrionale, Hoffm. 1
" serratum, L. 2
" thelypteroides, Michx. 3
" Trichomanes, L. 4
b. var. incisum, Moore. 3
" viride, Huds. 2
Aneimia adiantifolia Swz. 4
" Mexicana, Klotz.
Blechnum serrulatum, Rich. 3
Botrychium boreale, Milde. 1
" lanceolatum, Ang. 2
" Lunaria, Swz. 1
" matricariæfolium, A. Br. 3
" simplex, Hitch. 2
" ternatum, Swz. 3
b var. lunarioides, Milde. 1
d. var. obliquum, Milde. 3
y. var. dissectum, Milde. 2
" Virginianum, Swz. 5
Camptosorus rhizophyllus, Link. 4
Ceratopteris thalictroides, Brongn. 2
Cheilanthes argentea, Hook. India
" Alabamensis, Kze. 2
" Californica, Mett. 4
" Clevelandii, Eaton. 3
" Cooperæ, Eaton. 2
" Fendleri, Hook. 9
" gracillima, Eaton. 2
" lanuginosa, Nutt. 2
" lendigera, Swz. 1
" leucopoda, Link.
" Lindheimeri, Hook. 4
" microphylla, Swz 1
" myriophylla, Desv. 1 — 812
" Parishii, Davenp. 1
" tomentosa, Link. 6
b. var. Eatoni, 8
" vestita, Swz. 3
" viscida, Davenp. 2
" Wrightii, Hook. 2
Cryptogramme acrostichoides, R. Br. 3
Cystopteris bulbifera, Bernh. 3
" fragilis, Bernh. 6
" montana, Bernh. 1
Dicksonia pilosiuscula, Willd. 5
Gymnogramme hispida, Mett. 2
" triangularis, Kaulf. 9
Lomaria spicant, Desv. 5
b. var. serratum, Woll.
Lygodium palmatum, Swz. 2
Nephrolepis exaltata, Schott. 3
Notholæna Aschenborniana, Klotz.
" candida, Hook.
b. var. cretacea, 2
" Fendleri, Kze. 1
" ferruginea, Hook, 3
" Grayi, Davenp. 1
" Hookeri, Eaton. 4
" Lemmoni, Eaton. 2
" Newberryi, Eaton, 5
" nivea, Desv. 1
b. var. dealbata. 4
" Parryi, Eaton. 2
" sinuata, Kaulf. 6
" tenera, Gillies.
Onoclea sensibilis, L. 6
" Struthiopteris, Hoffm. 3
Cheilanthes Pringlei 1,
"
Selaginella rupestris 2
" selaginoides 1
"
Equisetum robustum 1.
Ophioglossum crotalophoroides, Walt. 1
" nudicaule, L. fil. 1
" palmatum, Plum. 3
" vulgatum, L. 3
Osmunda cinnamomea, L. 5
" Claytoniana, L. 2
" regalis, L. 3
Pellæa andromedæfolia, Fee. 6
" aspera, Baker.
" atropurpurea, Link. 6
" brachyptera, Baker. 3
" Breweri, Eaton. 2
" Bridgesii, Hook. 2
" cordata, J Sm. 4
" densa, Hook. 2 California.
" flexuosa, Link. 1
" gracilis, Hook. 2
" marginata, Baker. 1
" ornithopus, Hook. 6
" pulchella, Fee.
" ternifolia, Link. Sandwich Islands.
" Wrightiana, Hook. 8
b. var. longimucronata.
d. var. compacta.
Phegopteris alpestris, Mett. 3
" Dryopteris, Fee. 3
b. var. Robertianum.
" hexagonoptera, Fee. 3
" polypodioides, Fee. 4
Polypodium aureum, L. 6
" Californicum, Kaulf. 7
" falcatum, Kellg. 7
" incanum, Swz. 4
" pectinatum, L. 2
" Phyllitidis, L. 2
" Plumula, H. B. K. 7
" Scouleri, H. & G. 9
" Swartzii, Baker.
" thysanolepis, A. Br. 1
" vulgare, L. 6
Pteris aquilina, L. 3
b. var. caudata Hook. 5
d. var. lanuginosa, Bongard. 3
" Cretica, L 5
" longifolia, L. 3
" serrulata, L. fil. 2
Schizæa pusilla, Pursh. 1
Scolopendrium vulgare, Smith. 3
Tænitis lanceolata, R. Br. 1
Trichomanes Petersii, Gray 1
" radicans, Swz. 2
Vittaria lineata, Smith. 2
Woodsia glabella, R. Br. 2
" hyperborea, R. Br. 2
" Ilvensis, R. Br. 3
" Mexicana, Fee. 4
" obtusa, Torrey. 4 var. glandulosa. 2
" Oregana, Eaton. 1
" scopulina, Eaton. 3
Woodwardia angustifolia, Smith. 5
" radicans, Smith. 3
" Virginica, Smith. 4

32 Genera, 161 Species, 24 Varieties.

Lycopodium lucidulum 2
" clavatum 3
" dendroideum 3
" selago 1
" annotinum 4
" cernuum 1
" inundatum 1.

57 East 54th St.

New York. April 21st 1884.

Mr Davenport

Your little package is
received. and you will please
accept my sincere thanks for it. -
I trust that your shoulder has
quite recovered by this time. & that

your family & yourself are in your
usual health. – My Mother is better
& stronger I am happy to say than
I had supposed it possible she could
ever be again. – I wish I knew how to
thank you for all your kindness to
me. – and that I could make you some
slight return for it. – Yours respectfully
A. A. Lloyd.

57 West 131st St.

New York, Oct 31st 1884.

Mrs Davenport

I have been intending to notify you of our change of residence from 57 East 34th St. ever since our removal here three weeks ago. - but have been prevented until now.

I could have sent you a card, - but I wished to ask your opinion as regards the ultimate disposal of the collection of plans. - It has been suggested to me by one of my friends that Bowdoin University would be a judicious place to bestow them: I received a letter from Mr Bailey in reply to one from the Secretary

friend shows them very anxious to have them: in view of the growth of Beacon, the interest in Botany & the proposed Botanical garden there, & I have been thinking seriously of it, - though I think it would be unwise to promise them until I am prepared to part with them. —

My Mother said that he would prefer giving them to Harvard or Yale, - but he thought that one Exhibition would probably receive - Mr Brewer's ferns, & the other Prof. Eaton's, & that his would not be needed by either, giving them to me he left them with no other thought than that they might occupy & comfort me.

When you are at leisure will you be kind enough to tell me what you think of this proposition? I should like your opinion & that of Prof. Eaton in regard to it. — I want them to go where they can be of the greatest service. My friend says it should have a special place & case. — & I am inclined to think he is right. — As soon as possible I hope to resume my work on them, which had progressed rapidly until house cleaning & moving began.) — It would give me great pleasure if some time I could show you them. Yours respectfully

Alma H. Gould.

lately that I feel as if more must be done than I am aware of. - Your crew pursuit must be very fascinating. - but I trust that you will resume your fem work soon. - I have been thinking lately of that little Cheilanthes of Mr. Faxon's. - did you ever place it to your satisfaction? -

Yours respectfully

Anna A. Stout.

51 West 130th St.

New York, Dec. 18th 1884.

U.S. Dept

Sir. I'll please excuse my delay in acknowledging your kind letter. I have been very ill lately & not quite well - & so have been prevented until this time. - I am pleased that the proposal to place the ferns in the Botanical Museum meets with approval. - I should not like to do anything contrary to your judgement - and it is a relief to me to feel that I know their ultimate destination. - I am assured that they will be properly cared for & appreciated there. - I hope that some time I may meet Prof. Farlow as I should like to talk with him

about them. — I am glad that Mr Pringle found Notholaena Aschenborniana — I did not understand where he intended collecting when he left on his last trip. — but I wrote asking him to remember me & observe & send me anything new or interesting: there is a full representation of Mr Rusby's ferns, — or a specimen of each of Mr Pringle's from the same country: — knowing this, if it is not too much trouble will you be kind enough to ask him to send me whatever you think it well for me to add to my collection — & I will be greatly obliged to you: — I think I should have a good representation of N. Aschenborniana — I greatly desire to add the typical N. candida: — perhaps if he has not found it yet the next excursion will give it to him, — & some of the other missing species: — I think I ought to have what ever he may find on the Mexican boundary. — & should be very glad if he were tempted to cross it. — I have not seen Miss Reynold's Polypteris: — I intended writing her for it at the time that our house was sold, & I was obliged to arrange for our removal: — — if you can spare me a specimen — I shall be very much obliged to you for it: — do you know if she ever collected Aspl. ciliatum and P. Scaturgii? — The Botanical Magazines say so little of ferns

51 West 130th St.

New York. Dec 9th 1884.

Mr Davenport

Your kind and sympathising letter was duly received, & I should have acknowledged its receipt very much sooner had I not been prevented by my brother's sudden illness: she was threatened with pneumonia. - but fortunately escaped, & is very much better now, though still confined to her bed, & needing much of my time & attention: - I hope in a few days that she will be about her room again, and we are very happy that the attack was not

more serious. My fern work is necessarily postponed, - but I could no longer delay writing to thank you for your kindness. As soon as you publish the little Heliantha I shall collect my specimen, - & I hope that some Helianthus will be fortunate enough to find more of it. - I hope that Mr. Pringle received my letter & remittance before he left on his last collecting tour. - I did not hear from him & should regret exceedingly to know that it had not reached him; - as soon as I receive his package I will forward the amount due, & will be greatly obliged to him, & to you for ordering for me. Please accept my best wishes for success in your fern work, - & for a very happy New Year for yourself & family

Yours respectfully

Anna A. Stout.

which I am much pleased to have; I do not see why they do not belong as truly with our ferns as if they grew on our side of the boundary; what is your opinion?

Will you be kind enough to explain to me how you name a fern provisionally? I named the little Cheilanthes [illegible] eginosa var. fibrillosa -, as soon as I saw your paper in the Bulletin, but I do not understand the methods of changing names except by erasure. I am about reviewing the N. Am. ferns to see if there are any inaccuracies in my tickets which should be corrected, and your suggestions from you will be very welcome. Please accept my thanks for all the kindness you have shown me hitherto; and believe me

Yours gratefully

A. A. Eaton.

51 West 130th St.

New York, March 5th 1886.

Dr. Geo. E. Davenport

I have been intending for many months to send for your criticism a note which I have placed with my Brother's Cheilanthes, & to ask if you have any objections to my use of your name in it? if you have, please say so frankly, & I will omit it.

I felt the necessity of placing such a paper with the plants which he left unnamed, & which I did not feel at liberty or competent to name myself. I am very anxious to see your Article on the Cheilanthes, and have been watching for a notice of it in the Botanical Magazines for months: - when it is ready will you be kind enough to send me a copy of it? — You will have seen in the Botanical Gazette that I have decided to place the Herbarium in Brown University. I had no thought of making arrangements for its transfer when I invited a visit from Prof Brainerd last summer, but on many accounts it seemed

desirable to settle upon its destination, and I think it will probably be of as much service there as anywhere. The books will be with the ferns in a special case. - & my own case will be used also; & the whole will be known by my Brother's name; as you suggested that it should ~~be~~. I retain it until my work is completed and I am prepared to part with it, - or if I find myself unable to finish it as I have sometimes feared. Prof. Bailey will take up the work himself. I would like to have stipulated that the duplicates should be used in extending the fern collection, but felt it unreasonable to do so; I would be glad to make exchanges now while I have them if the opportunity were offered me; possibly had I seen Prof. Bailey I might have been able to do something about it, - but he did not visit New York, which I regretted, as I should like to

seen him. I should have written to consult you had I not known that you disapproved of Brown as a depository for the Herbarium, & that in August you were likely to be away from home; & not being well - I have since delayed writing you, and am mortified that you should have learned of the arrangement through the Press, rather than from myself. I owe too much to your kindness ever to forget it, though I am quite aware I may have seemed to do so. I found it so difficult to decide on parting with anything that I have reserved for myself a small set of N. American ferns.

Please accept my thanks for your kindness in mentioning me to Mr. Pringle last spring; unfortunately he was so busy that he forgot me in the distribution of his plants, & could give me nothing of much value to me in the summer except the scaly Cheilanthes that you mentioned in your interesting paper in the March Bulletin; lately he sent me many of my missing species from Mexico.

5 West 125th St.

New York, March 19th 1886.

Dear Brownhal

I am greatly obliged to you for your kind reply to mine letter, for your cordial acquiescence in the use of your name in our Chilian Fl. note, and your statement of your arrangements for the future care of your Brothers collection; please accept my thanks for all.

Mr Pringle sent me in August last, Cheil. mysiophylla, Ch. Pringlei, Aspid. Felix mas & fœm. Havanense: and Callip. from Mexico - Woodsia Mexicana, Poly. thysanolepis, Ad. chilense, var. pilosulum: Ad. trichodepis Eaton's forms.?). Cheil. mysiophylla, microphylla Wightii, viscosa & leucochroa: Both. vivea,

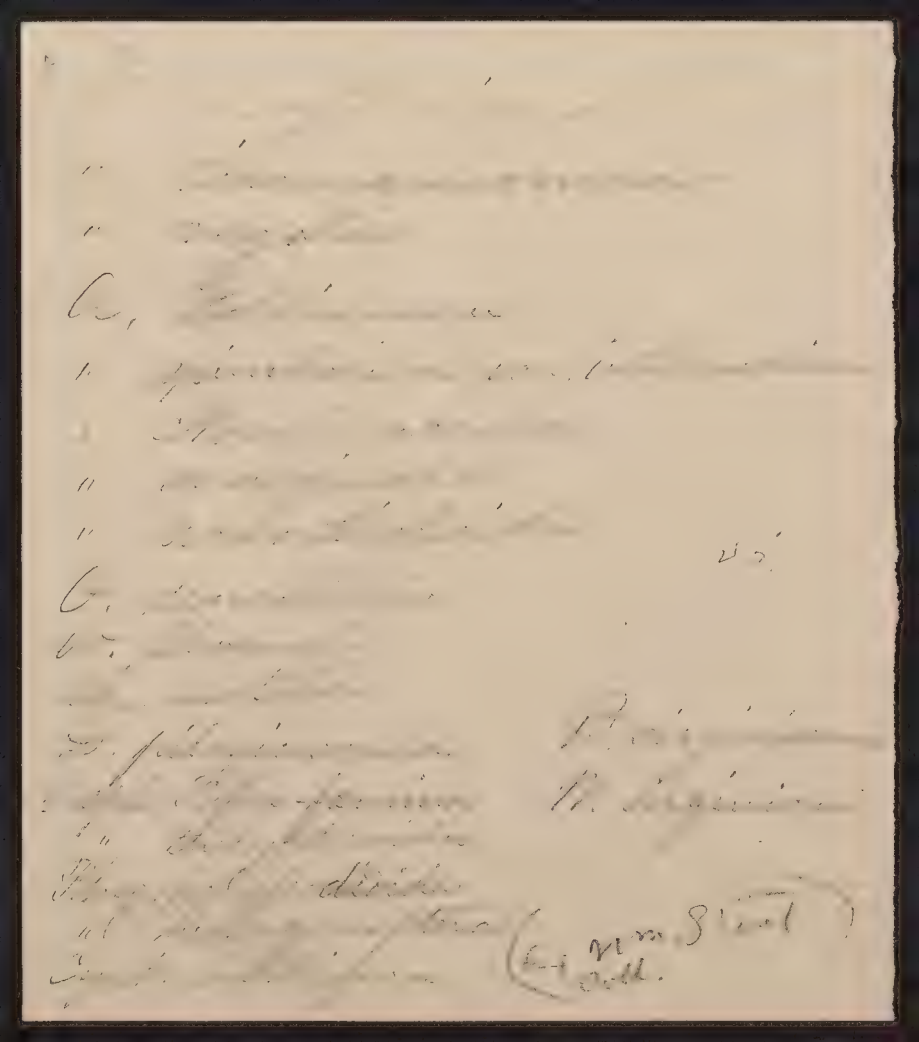
his address is still "Santas Fenas," I wish to write him for some of his plants.

When you are at leisure to write me I should be most happy to hear from you and if at any time, I can serve you in any way, I trust you will give me the pleasure of doing so.

Yours respectfully
Anna K. Slosson.

R. Eschenbergiana N. 441. & R. candida. var. cubacea. Aspl. Serpens var. repens Sullivan 448. P. hystera, Muehlenbergii & levigata. Since sent the plants that he thought would interest me to write me. - I presume that if he had found a new species he would have written me. Does Hemionitis serrulata belong to Pteris. Swartzia. Pteris. lebogona. & Aspl. ebeneum. var. prolificum. unfortunately she sent no fern tickets with the two plants & my letter to her asking for information as regarded localities remained unanswered, which I regret as the specimens seem to lack value on that account.

I have just received the Botanical Gazette for March. & have read your note in regard to Dr. Robertson's views. Please tell me if



Newport, 21th June/82

Mr. Geo. E Davenport;

Dear Sir;

My brother, Mr Stoit, was taken ill last night & I write at his request to inform you that he will not be able to answer your letter for the present. He shipped you to day per Adams Ex. two packages, one containing your Woodcuts, which he returns with thanks) & some books which I think he has written you about; the other containing the mounted involucres you wished to examine. Please acknowledge their receipt.

I believe I have now written you substantially all he desired me to say, but if I have omitted

anything I trust you will
pardon it, & that he may
soon, with his own pen,
resume his correspondence
with you;

Yours truly,
Richd Stout

37 Spruce St.
Newport. June 29/82

Mr. Geo. E. Davenport.

Dear Sir,

Your kind note of 26th inst. was rec'd by me in time to be communicated to my brother. He appreciated your sympathy & whispered to me to send you his kind regards. He died last night very peacefully, & after the brave struggle against disease he has maintained so many years, the end was very welcome.

Yours truly

Rachel Stuart

4

307 Spruce St.
New York, July 6/82

Mr. Geo. E. Davenport.

Dear Sir:-

Your very kind letter of 3d inst. was duly rec'd. The sympathy you so warmly express is grateful to us all, & we take pleasure in sending you herewith one of his latest photographs. It was taken some years ago & will hardly be quite satisfactory to those who only saw him during the later years of his life.

My sister, to whom my brother left his farm, would be glad to have you drop the mounted microbes if they would be of use to you.

Yours truly

Rich'd Hunt

New York, 11th Nov. 1874.

Wm. Geo. C. Davenport,

Dear Sir,

I am anxious to obtain a specimen of Ailanthus viscida, a fern which evaded me last spring. I offer in exchange for it the (Ptychomnion) new C. Calif. which I found in the San Bernardino Mts, Cal. I enclose a list of my duplicates, marked "v", & desiderata, marked "x", that you may correct it & exchange if you desire.

Hoping to hear from you soon I am Yours, Wm Stout

P.S. 57 East 11th St.

I am indebted to Mr. Sullivant & Dr. Lesquereux, for your address. W.S.

not knowing that anything of special value grew there I being thoroughly exhausted, gave it up.

Yours

Sheldon Dent

Pasadena Cal.

Cincinnati, Oct. 6th 1891.

Dear Mr. Underwood

Grandin.

I have been out of town for several days & only got home last evening.

I send you herewith specimens of Cheilanthes elegans which I found last Spring in Cajon Pass in the San Bernardino Mts, San Bernardino Co., California. The altitude of the locality was about 4000 ft & the plant grew exclusively on the rocks.

In regard to the classification of this fern Prof. Eaton writes me that Fournier makes it

distinct from C. myriophylla & said he didn't know but he (T.) was right. Hooker makes it a variety of C. myriophylla, a classification which doesn't seem to me well grounded, as the myriophylla has wool under its scales while the elegans has none. With this radical difference in the plants can the elegans be properly classed as a variety of C. myriophylla? I will be much obliged if you will favor me with your opinion on this point.

In addition to Cheilanthes elegans I have collected of this year ferns of Southern Cal. Notholaena Parryi, N. candida, Ch. Coopera, a fine growth of Ch. Fendleri, & other ferns which you will find indicated on the check list sent you on 4th inst.

I narrowly missed finding C. viscida, but I missed it. Prof Eaton, in his "Ferns of N. Am.", in giving its habitat cites "Whitewater Cañon in the Colorado Desert, Arizona". There is a Whitewater Cañon at the Eastern end, & on the North side, of San Gorgonio Pass, Cal., & at the Western border of the Colorado Desert. It is about 140 miles from Arizona. I presume this is the locality meant. It is also, probable, the place described as "the eastern slope of the Sierra, near San Gorgonio Pass, Cal."
At the mouth of this Cañon I hesitated about exploring it, but

I sent the best root of C. elegans I had left.

Am much obliged for the address of Mr. Chas. E. Faxon. I shall not be able to use it at present as I leave for the mountains of western North Carolina in about ten days, (shall spend the winter + Spring in the South), + will not have time to attend to further exchanges till after my return home.

Yours

W. W. Hunt

Sept 2nd 1891

[illegible]

[illegible] 11th [illegible]

[illegible]

[illegible] 11th [illegible] of the marriage of [illegible] were duly recd.

I am very much obliged for the specimens sent me + your kindness in giving me the information I desire as to the classification of C. elegans + C. megacephalus in full. Before I started. I have not had time to look at the elegans again, but as soon as I receive your next letter with the promised megacephalus, of which I have now no root specimen, I shall

be glad to study the plants carefully in the light of your letters.

I put up for you yesterday, & have sent by express to-day, the ferns you desired. I sent in each case the best specimens & could & regret that I had not in all cases good botanical specimens to send. As far as I was able I sent specimens showing the different developments & forms of growth of the plants as I found them. Pellaea Wrightiana I have never found abundant in southern Calª & taking all I saw into my travels I got but little. The Adianta are without roots but otherwise good. I had no root specimens of Pellaea Bridgesii & the Aspidium munitum sent will be of little or no value to you. The last two species I collected when I had no botanical interest & I have parted with the best & nearly all of A. munitum. The better developed fronds of this plant had longer & narrower pinnæ, placed very obliquely on the rachis, crowded & imbricated & I could not press the rigid frond so that it would not show the fruit from both sides. I am sorry I could not send you any of it. A root specimen of this form of A. munitum is, I presume, what you wanted. I have plenty of the typical munitum

Prof. Eaton, after citing authorities, left me to draw my own inferences, or take my choice, as to the classification of the new N. A. ferns. Being compelled to form an opinion of my own I preferred, after a careful, but still superficial, examination of it & C. myriophylla, to call it C. elegans, & have distributed it under that name, sometimes giving Hooker's classification as a synonym. But, of course, I know I have not the botanical knowledge & experience to qualify me to form an opinion of any value. I can't help feeling that the plants are distinct & want badly a good root specimen of the myriophylla. From the bit of root you sent me I suspect there is an essential difference in the vernation of the plants.

I will try & supply, as far

New York, 15th Oct. 1878

Dear Mr. Underwood

I am

Your very

Kind letter of 18th I duly rec'd. How much obliged for the bit of C. viscida & the C. myriophylla & for the promise to bear me in mind if you get more of the former. I also need very much a well-prepared root specimen of the latter & hope you may succeed in getting a spare specimen of each.

Thank you for your opinion as to the classification of C. elegans. I have not had time to examine it & C. myriophylla under a microscope but will do so some time during the winter. Your myriophylla has broader & coarser scales than

that I collected in the Yosemite mountains (also verified by Prof. Eaton) but has otherwise the same general characteristics. Examining both those you sent & my own specimens this morning under a magnifying glass I find that the scales seem to have fine pinnate scales ~~attached~~ growing out from the edge & attached to the base & lower portion & under side of the scales. Removing the scales I find the cup-like pinnules or segments filled with a bunch of woolly-looking fibre, seemingly wool & hairs, which is apparently only kept in place by the covering of scales, though it is in fact, I presume, attached in some way.

The base of the scales of the elegans, like those of the nyctiophylla, seems ragged with to branched edges & to have a few hairs attached on the under side. When the scales are removed there is no bunch of woolly fibre filling the segments & the sori are in plain sight.

(My nyctiophylla has much finer & narrower scales than yours & there is no more wool or hair, or both, under them.)

Now, supposing my observations to be correct — that the one plant has wool under its scales & the other has none — could one be properly classed as a variety of the other?

I would be glad to be instructed upon this point & will be much obliged if you will favor me with a brief yes or no to the question.

C. elegans was united with C. nyctiophylla by Hooker in the 1868 as well as the 1874 edition of Syn. Filicum.

as I am able, your wants as to
C. Clevelandii & C. Fendleri & wide
send you some root specimens
of them the first of next week. Prof.
Eaton wrote that mine was "his
idea of fully developed Fendleri —
finer than any he had seen before."
I think it must be only when the
ferns have been abused beyond
recognition that there can be any
difficulty in separating the Cals.
Fendlerii when mixed. My only
trouble was to find out what was
myriophylla, Fendleri &c I didn't
get straightened out till I sent
almost all the species to Prof. Ea
ton for identification.

My Yosemite ferns were collected
in October & the Southern Cals.
species in April & May. Excuse
my omission.

I enclose a few specimens of a form of B. ternatum I found in "Brown's Tract" last Summer, the form seemed to be constant & possibly it may be as well entitled to a distinguishing name as are some of the forms of B. simplex.

If you will, at your perfect convenience, just me up specimens of A. spinulosum & A. cristatum & their varieties I would be glad to have them for comparison & study. I want to make sure of the typical A. spinulosum & am dubious about the dubious var. dilatatum. I will be glad if you will bear me in mind when you get spare specimens of anything new or rare. I will try to get you something for them. Call upon me at any time for anything you need that I can spare.

Am much obliged for your information as to A. C. fern & if I go to Florida will avail myself of your kind offer to give me localities of the rare species there. Am afraid I shall find the A. C. ferns out of season but hope to get a little C. tomentosa as that plant wears a pretty good overcoat.

Yours

Meehan

37 East 34th St.

Cleveland Nov 18th 1854

Hon. Wm. L. Marcy

Dear Sir,

I would
like to know the percentage of C.
Woodward & Co. Cleveland, the
sums can be collected for in
the city of
New York and also forwarded to
Wm. L. Rogers Co. Cin. O. The
letter
contains specimens of
collections from other localities
in the same vicinity as ours.

Wm. Woodward & Co. Rogers Hughes
& Co. differ from your Law Co.
form & it is much nearer,
think, the regulations of Market
that I have concluded to enclose
to you my specimen that you

... to see & examine it. Please return it when you are through with it as I can not spare it.

Mine has the "lanceolate-acuminate entire scale" called for in Vol. I, fringed at the base with cilia.

Yours from Lake Co. Cal. has lanceolate scales, sometimes with an acuminate point, which have little processes, dorsal hairs, making a fringe thin edges at & toward the base.

The scales of the C. elegans have similar processes most than ... but I could not find this on ... with a microscope the ... in the water side I succeed to see with a magnifying glass which I last note. Under the scales there is no real hairs hiding the processes as in C. myriophylla.

Please excuse my clumsy & unscientific attempts to describe.

Yours

...

New York, 26th March 1877

Mr. Asa L. Davenport,

Dear Sir,

Your
postal of yesterday was received
this morning. I sent you my
C. myriophylla yesterday.

Prof. Watson wrote me that my
plant seemed to be the same
thing as some C. elegans he
had from Santo, South America,
cited authorities as to its classi-
fication, & said he should gladly
use it & my C. Bonplandii for
illustration in his "Revision of Cl. Am."
Until last evening I had not
questioned the correctness of his
analysis, but after yesterday's ex-
amination I wanted to find out

whether my C. elegans or the C.
elegans of Hooker, as my myrio-
phylla seemed to be. I have
not the "Species Filicum" & did
not succeed to-day in obtaining
access to a copy.

I think there must be a mis-
take somewhere, & being unable
to compare my plant with his
full description, I have written
Prof. Eaton requesting him to
send me a specimen of his Vallis
C. I guess that I may see & ex-
amine the plant itself.

With many thanks for your kind
interest in this matter of mine.

Yours,
Wm. Trelease
37 East 44th St.

varieties of C. insignis, hybrids & genuine. Prof. Eaton about it. He wrote that the real kinds of Cheilanthes worried him a great deal & that he did not know all about them &, last of all, that he was all at sea about C. insignis, hybrids & C. elegans & had no positive opinions.

I have written Prof. Eaton giving him the result of my examination of the Unit C. elegans & my Cajon Pass Cheilanthes & presume, he will, at his convenience, give the latter further study & that ultimately he will assign it to its proper place among our ferns. Meanwhile I shall distribute no more of it. The little I have sent out I sent in good faith depending implicitly

when I wrote requesting to see the Pasadena plant,

Glen Ellen, 5th Dec. 1894.

Mr. Geo. E. Davenport,

Dear Sir,

I am much indebted to you for your kind & attractive letter of 27th ult. which was rec'd on 30th, & your gift of 30th ult. & the specimens of Asplenia were rec'd yesterday. Please accept my thanks for them & for the specimens of C. elegans. I wanted the Asplenia, especially two of the forms, for comparison & study. I like to be sure of my specimens & am trying to learn one at a time, to know our N. Am. ferns thoroughly. I read & studied your valuable paper on A.

specimens & it occurs in the Bot. "Am. Naturalist" with much interest some time since.

I have not had time to write you until now.

I rec'd on Friday morning last from Prof. Gates not only the Pinto C. elegans, which I had considered my Cajon Pass Chil. with identical, but the S.A. specimens of C. elegans & many specimens of C. nigriophylla from L. H. Cl. & D. Am. I feel deeply indebted to him for his kindness in affording me an opportunity to learn one plant well. I worked hard on the specimens Friday & Saturday & returned them yesterday.

Examining the Pinto C. elegans I found it had ovate-acuminate entire scales & hairs attached to the segmento under the scales. As it possesses in a degree the distinguishing characteristic of C. nigrioph. the character is, for aught I can see, fully justified in uniting them.

My Cajon Pass Chenanthus, as you know, has scales similar in form to the above C. elegans but somewhat lacerated about the base & has no hair under the scales in the segmento.

Of course it would seem that an unaccountable mistake have been made. From the first I could not see how my plant could be properly classed as a

I have been detained here beyond my intention & business affairs may keep me a week or two yet. When I reach the C. Cameron area county, I will get you both the prepared specimens & living roots if I am able.

With many thanks for your letter &c. I am

Yours

W^m Stout

57 East 34th St.

on Prof. Eaton's analysis. I regret the apparent mistake exceedingly on Prof. Eaton's account as well as on my own. He had abundant specimens of the plant & they were the same thing as that sent you.

I believe you are right in the opinion that "it is only a little more highly developed C. fendleri than the rest". I worked with a microscope all day yesterday in a bad light & could not find any San Jacinto Mts. C. fendleri without finding anything satisfying about them. The San Jacinto plant grew almost exclusively at the base of rocks & the mature fronds are gray

on the under side. P. Coyote Hills first grew experimentally in the rocks & the mature fronds are reddish brown. In other differences in them the specimens you have will give you better than I can. I think if the entire collections of them were mingled I could separate them correctly, chiefly by the difference in the veins. The nature of the difference I am unable to estimate. But the two plants do not run to any form each other more than do the forms of C. myrophylla & have both studied.

I suspect my P. Wrightiana to be good P. ornithopus, as specimens here, in a ground

point between a small undeveloped plants of it will grow in a soft of peat that suits P. Wrightiana. I know that in our county, one needs to scrutinize P. Wrightiana closely, but I had supposed I had learned to distinguish between them and the specimens recently without hesitation. P. Wrightiana, too, I think, sometimes shows a propagation of ornithopus, & I can show a few fronds I gathered in Feb. 1876 in the mountains near Yosemite Valley where, I think, no ornithopus grows. If I am wrong I should be glad to be corrected.

the plant assigned to its proper place.

You say "I do not see how we can make elegans of it, or unite Tendleri with elegans under the latter name as Prof. Eaton intimates may be done." As Prof. Eaton has not intimated anything of the kind in his correspondence with me I presume you refer to some of his correspondence with you. I do not see how either one or the other can be done.

I have Prof. Eaton's reply, dated 4th Inst., to my last letter saying "I have not time to investigate C. elegans &c at present, owing to other work crowding me, & will have to leave it till I take it up in the Ferns of N. America."

New York, 11th Dec. 1878

Wm. Geo. E. Davenport,

Dear Sir,

Your favor of 4th Inst. was rec'd on the 9th.

I had not noticed the peculiar odor of my Cajon Pass ferns until you called my attention to it. It is quite perceptible. My C. Tendleri seems odorless.

I would like to know whether all your specimens of Tendleri from different localities have the broad ovate scales of my San Jacinto C. Tendleri or whether some of them have longer & more pointed scales, grading toward the scales of the Cajon Pass

plant & forming connecting links between. If not, as the species of the scaly kinds of Cheilanthes are founded largely, perhaps mainly, on the color, character & form of the scales, I think there may be difference enough between the Cajon Pass plant & the typical C. Fendleri to constitute a good variety or possibly, a distinct species. Of course the other differences are to be taken in account.

I presume the difference in hab. it is worth something — the San Jacinto Fendleri growing almost exclusively at base of rocks while the Cajon Pass fern grow exclusively on the rocks. Mature fronds of the former are gray, of the the latter red. dish brown. The pinnae of the latter are much broader at the base than those of the former. I seem to have noticed, too, under a microscope, a difference in the integral structure of the segments of the two plants.

As I wrote you before I am unable to estimate the value of these differences, but it seems to me that these two plants are too far apart to be bundled together as identical unless plants from other localities fill up the gap between them leaving no place to draw a distinctive line. If the gap is not thus filled, & the Cajon Pass plant must still be assigned to C. Fendleri, is there not sufficient basis for a good variety? My only care in this matter is to have

It may, therefore, be a good
while before I hear anything
more from him about it. I
think the Cajon Pass plant is,
in his mind, involved with
C. nyctiophylla & C. elegans &
that he wishes to give the whole
matter thorough study. I am
sorry to have had to bother him
so much, & especially to have
been placed in the attitude
of questioning his judgment,
& will be heartily glad when
this ghost is laid. I regret
the attitude in which I have
unfortunately been placed to-
ward him in my correspondence
the more because of his mis-
former courtesy & kindness to me.

May I ask whether the new Catalogue upon which you are at work is simply designed for the Davenport Herbarium - or whether it is general & for general use?

P. ornithopus is more abundant in Southern Cal. than any other fern. It is a ground plant growing often, however, among rocks. Plants of it will sometimes grow in the rocks in crevices but are always small & undeveloped. I don't remember seeing any ornithopus in the locality near Yosemite Valley altho' I got my P. Wrightiana, & I know I collected more of it & I gathered specimens of all the ferns I saw.

I am much obliged for your

kind offer to show me your Society Herb. if I visit Boston. I value the invitation & am only sorry I cannot now avail myself of it.

If you visit New York at any time when I am in town I should be glad to have you call upon me.

Business exactions have kept me here much beyond my intention & expectation. I hope to be able to get off in a week or ten days. I shall be glad to hear from you at any time. Letters addressed here will be forwarded to me during my absence.

Yours, Wm Stout

37 East 34th St.

New York, 19th Dec. 1878

Mr. Geo. E. Davenport.

Dear Sir, Your favor of 18th inst. was rec'd. last evening.

I am very much obliged for your final report on my Cajon Pass plant & am entirely disposed to accept your judgment in the matter. I had thought the differences between it & my San Jacinto C. Fendleri, & the Fendleri I had from another locality in San Diego Co. Cal., might form sufficient basis for a good variet, unless spec-

kind.... in investigating so thoroughly & reporting so fully on my Cajon Pass plant

I am

Yours,

Wm Stout,

57 East 34th St.

mens from other localities seemed to fill the gaps between them. As you write that your series of specimens supply these links there would seem to be nothing to do but class it as C. Fendleri as you have done. Certainly there is not more difference between the San Jacinto & Cajon Pass C. Fendleri than the different forms of C. myriophylla, recently submitted to me by Prof. Eaton, exhibited.

I do not believe in trying to <u>make</u> varieties & did not want one made now for my sake. I am quite satisfied to have the plant assigned to its proper place.

I ~~should~~ would have written your friend Mr. Fagon long ago proposing exchanges had I known I would be detained here till this time. I now expect to start South on the 20th instant & shall find the N. C. ferns out of season.

I will be obliged if you will send three copies of your new Catalogue to my address, when it is published, & I will remit for them.

Thanking you again for your

Asheville, N.C. - Mch. 1/79

Wm. Geo. E. Davenport,

Dear Sir,

I send by this mail a couple of living roots of Ch. tomentosa. They are not satisfactory to me, & I hesitated at first sending them, but they are the best I have seen. I have found but few existing roots & the plan to, being out of season, seem poor.

The soil here is red clay & the roads have been very bad all Winter & have permitted but few & short drives. Chilanthes vestita & one or two hardy Asplenimms are the only things I have seen in fair condition.

I hope the roots I send

may turn out better than they promise;

Yours

W. Stout

57 East 54th St.

New York.

P.S.

I may leave here in a few days, so I give my N.Y. address. Have met no one here interested in farms.

W.S.

Ala. Spring, Ala.
16th May 1879

Dear Dr. Davenport,

Your postal of 5th inst. was duly rec'd & I take pleasure in sending by to day's mail some root of C. tomentosa, C. Alabamensis & Aspl. parvulum.

I "sliffed up" on C. Alabamensis & the plants of that species are very different. I found in one place a very few plants of it & left them that they might mature as much as might be before taking them. A party passing here, including, I understand, a Harvard Professor collecting botani-

cal & geological specimens, found & took the best of them two or three days ago.

I will send you some pressed plants of C. tomentosa & Asph. pauciflorum, &, if you care for it, some Asph. montanum, which I found here, after I get home. I hope to be in Ch. J. on 15th inst.

I have prospected the country about here as thoroughly as I could in the time I have been here & with my limited strength. I have found here 75 species.

I am sorry to hear of the sickness in your family & sincerely hope that now all is well with you.

Let me know if you want anything that I am stocked with. I collected here a little P. incanum & have some C. verticillata (it grows here) for me. Asheville, N. C. gathered in June & plenty if it for them. Ought to.

With best wishes,

Yours

Thos. Hunt.

5 1/2 East 34th St.

Chicago

I have not forgotten about the Orgon. Lomarias & have been wondering if you got the promised specimens & whether there seems to be specific difference in the two plants. I wrote Mr. Howell (Willamette Slough) in November & receiving no reply, wrote again recently. M.S.

New York, 10th June 1879

Mr. Geo. E. Davenport,

Dear Sir,

I have not heard from you since the postal I sent when at Warm Springs, N.C. & I have feared that illness or some other trouble may have befallen you.

Did you receive the box of living plants of C. tomentosa, C. alabamensis & Aspl. parvulum I sent from Warm Springs?

I will send you by to-morrow's mail a fine specimen of Ad. emarginatum, from Poway, San Diego Co. Cal, to sup-

plement the incomplete specimens I sent you for your herbarium last ~~Summer~~ Fall.

I have also put up for you a few specimens of C. tomentosa, Rafn. glaucum & R. montanum, all from Warm Springs, N. C. & collected from 3. @ 4th Mlt. Am sorry the C. tomentosa & R. montanum are not better. It was too early in the season for the former & the latter attained but moderate development in that locality.

Call on me at any time for anything I can spare.

With best wishes for your self & the Davenport Herbarium

I am Yours

Wm Stout

57 East 34th St.

New York, 18th June 1879

Dear Mr. Davenport,

Yours of 14th inst. was rec'd. yesterday. I am truely sorry to learn of your recent trouble & sorrow. Be sure you have my sincere sympathy.

Pray do not feel obliged to send me anything for the plants I have lately sent. I shall be glad always to do what I can for you & your herbarium.

If you have copies of your "A. spinulosum & A.

cristatum & their varieties" &
of "Notes on B. simplex" &
will be obliged if you will
mail me at your convenience
once a copy of each & I
will remit on their receipt.

Yours
Jno Stout
57 East 34th St.

New York, 19th June 1879

Dear Mr. Davenport,

Yours of 18th Inst. & the package of ferns were rec'd. this morning.

I am extremely obliged for your kindness in sending the specimens, some of them are the first I have rec'd. of their species.

I am sorry you cannot give all the time to ferns you would love to. It is a very fascinating but very unprofitable quest.

Can you tell me how the volume containing Eaton's

"Times of the Southwest" is favo-
rable. Do not go to the
trouble of making inquiry if
you do not know. I can-
not make inquiry myself here &
would have done so but that
I doubted if it were for sale
in ordinary channels.

I hope you may receive
this before you answer mine
of last night.

Yours Truly
J Winston

New York, 24th June 1879

Dear Mr. Davenport,

Your favors of 21st & 23d. inst. were duly recd., the latter, with your A. spinulosum paper, this morning. Please accept my thanks for the pamphlet which is in more convenient form for my purpose than if bound in the "Am. Naturalist."

I wrote you for the "Notes on B. simplex" under the impression that I had seen in print a notice that you had it for sale with your Catalogue.

I believe you were right in rejecting my Californian P.

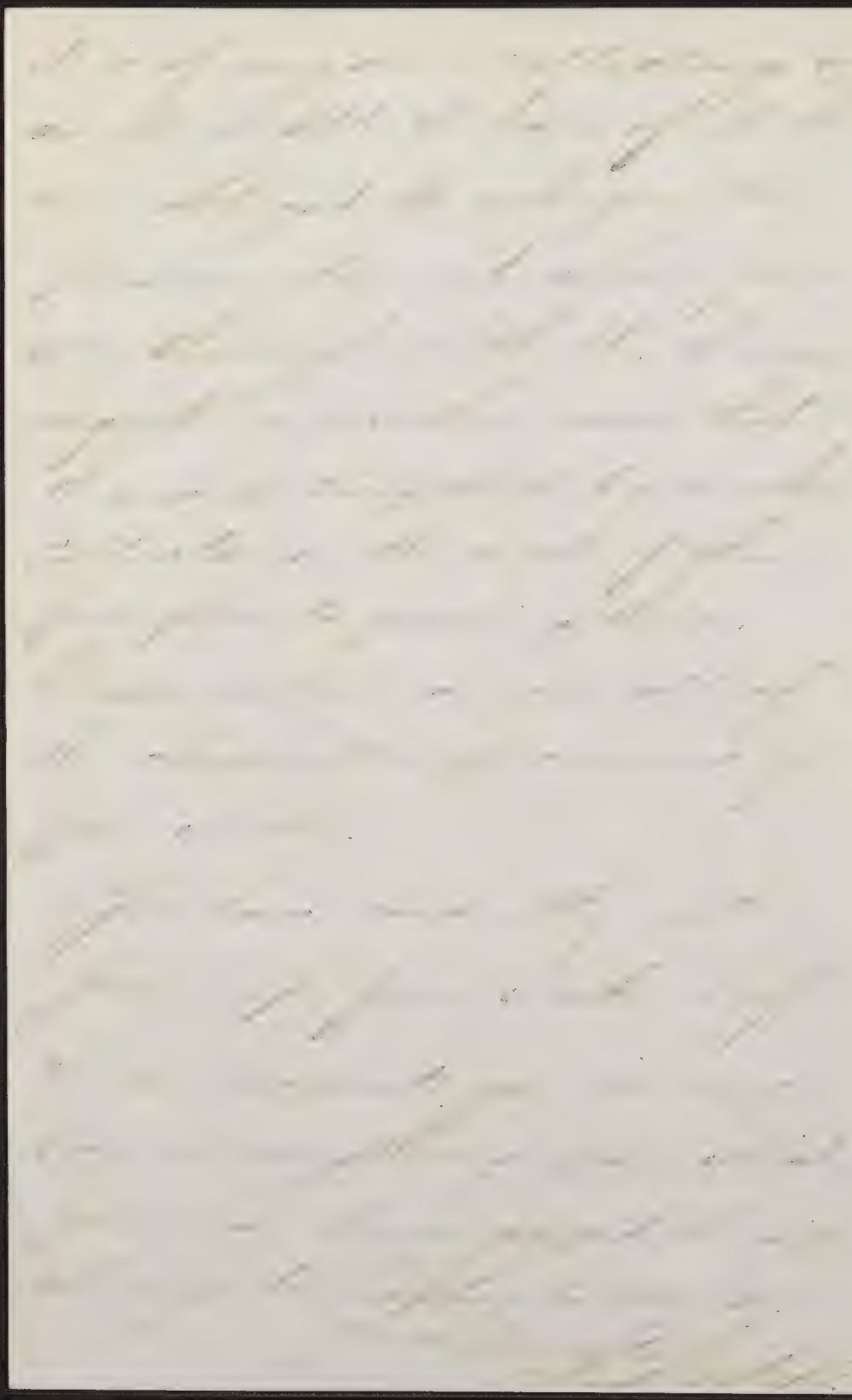
Wightiana. I see Prof. Eaton throws out all the Cal.n plants. I am satisfied that the southern Cal.n specimens I got were merely undeveloped P. Ornithopus & the Yosemite specimens probably were. They were such as I found collected & passing them as P. Wightiana & I was not experienced enough to know that I was badly instructed.

Call upon me at any time for anything I have that you may want.

Yours

Jno Stout.

57 East 34th St.



seemed to be C. myriophylla & the rest I was unable to place. My fronds have no hairs in the segments under the scales, the upper surface is naked & the memorandum says "stipes scattered on a slender, running rhizome".

I take special interest in C. myriophylla & have been very curious as to Prof. E's expected description in "Ferns of N. Am.". Of C. Clevelandii he said that it might prove only a form of C. myriophylla & for this & other reasons I have been anxious to see his idea of the latter clearly defined. I will be very glad of your report of conclusions from examinations.

Yours
Geo. Stout
57 E. 34th St.

New York, 28th July 1879

Dear Mr. Davenport,

Yours of 26th Inst. was rec'd this morning. I am very much obliged for your description of C. Alabamensis.

I enclose herewith my Yosemite & Miss Pelton's Lake Co. Cal. Ch. myriophylla, - all I have of the species. I presume the former is the better & more typical development of the two but I have not questioned the latter's truth. I have often wondered, however, whether your large C. myriophylla from Mr. Cleveland of San Diego was good because he

sent me some fronds for that species which I rejected as C. Clevelandii. The specimens were rough & weather beaten but, the uncertainties of loose fronds & out-of-season specimens aside, were certainly Clevelandii. The scales were copiously ciliated but I could find no wool or hairs attached to the segments under the scales, & the upper surface was naked while my Goldenite C. myriophylla shows distinctly slender scales & cilia attached to the segments on the upper side. But yours may not be the same thing he sent me. As you will now be reëxamining your specimens please inform me when you write whether yours from Mr. C. is good.

Another plant I have on my mind is Prof. Eaton's, C. myriophylla No. 553, Arizona, Dr. Palmer 1876. to which I called Prof. E's attention last Fall. If this should be among the specimens submitted to you I would like to know what you make of it. Prof. E. kindly told me to help myself to some of it & I have three loose fronds. I denied myself a root-specimen because I preferred he should have & examine it & contented myself with a memorandum description of it. Of the No. 553, mounted & loose, a frond or two (mounted)

will always be good & if you want anything of mine during my absence write & I will have it forwarded to you. Keep the Cheilanthes as long as you need.

I expect to go to Mt. Mansfield (Stowe) Vt & visit Smuggler's Notch &c & hope to collect some species I have not seen in their growing state.

I have spent a good deal of time in the study of ferns, much of it having been given to foreign ferns of which I have accumulated a good many specimens. I do a good deal of work & seem to accomplish very little.

Yours Jno Stout
57 East 34th St.

New York, 1st Augt. 1879

Dear Mr. Davenport,

Yours of 29th & 31st Ult. & the C. Alabamensis have been rec'd. I am very much obliged for your kind & interesting letter of yesterday.

Your letter has put me all at sea about C. myriophylla &, if Miss Pelton's Lake Co. plant is to be assigned to C. Fendleri, about that species also. Miss P.'s plant undoubtedly has wool or hairs in & attached to the segments under the scales & is, apparently, pilose on the upper side, charac-

ters not belonging to C. Fendleri, & the contemplated reference of it to that species does not immediately commend itself to me. It may not be a true mycrophylla, though it seems to me probable that it is allied to that species, but the characters I have mentioned & its tufted stipes would seem to keep it distinct from Fendleri.

However, as a result of the investigations you are now making, I may have to accept a different ideal from my present one of what is typical C. mycrophylla, & C. Fendleri, & for the present, I can only be glad the examinations are being made, feeling sure that they will end in a correct elucidation of the species studied.

Of course I should be glad of a report from you of results but I feel almost guilty when I receive one of your coveted long letters. I would be glad to help you in any way I can in your fern work & the writing of long letters to me seems just so much hindrance, -taking time you can ill afford to spare.

I expect to leave town in a few days & be absent about two months. My New York address

Am glad you have a chance of getting some C. rigidula & to learn of the new Calif. species. I myself rec'd the same from San Diego Co. & have found without entire stipe of an Aspidium (Cephalodium) which I think I now at least to that locality. It is quite different from the A. rigidum, one. argutum of Southern Calif. & is perhaps a form of A. Filix-mas. Only a single plant was found but search for more will be made next season. I wanted to get more of it & botanically complete specimens before submitting it to the authorities.

With many thanks for your letter I am yours Wm Stout,

57 East 34th St. - New York

Mt. Mansfield Hotel

Underhill, Vt. - Sept. 18/79

Dear Dr. Gray,

Your very kind & interesting letter of 13th duly reached me here last night. I am much obliged for your report of the result of your examination of C. myriophylla & C. Fendleri, & of Mr. Cleveland's specimens, now rejected as myriophylla & placed with Clevelandii. And I was not a little gratified to find my own analyses of these things in accord with your maturer judgment. It is just so much encouragement to me.

I would like now to re-examine Prof. Eaton's set of specimens of C. myriophylla, & study them

more closely than I [illegible] to [illegible] his C. Fendleri & to see why he is considering the propriety of uniting the species. I once or twice light upon them & have been trying to get additional specimens of both, but from what I have seen of them I cannot but think them distinct. C. Clevelandii, too, seems to me quite distinct from C. nuptioides, though Prof. Eaton in his description of the former said it might prove to be only a form of the latter.

Of course you shall have a [illegible] of my Yosemite C. nuptioides & I will send it to you with one A. fragrans & H. [illegible] bella from the mountains home, which will probably be about three weeks,

sooner if you will like.

H. hyperboreus I have not yet found, though I have no doubt I could find it, & I only remain here now to make another effort or two to get it. I should have left before this if I possessed now one quarter of my former strength.

I would like very much to see you & your Herbarium this fall if I am able to do so & can do it without trespassing too much upon your time. Please let me know whether a time convenient to you is likely to occur between now & cold weather & if so, please give me the location of the Herbarium & the name of the nearest good hotel.

Mt. Mansfield Hotel

Stowe, Vt. – Sept. 24/79

Dear Mr. Davenport,

I am
... obliged for your kind
... of 20th Inst. which
was received yesterday.
If nothing occurs to change
my programme I will leave
here on Tuesday, 30th inst. for
Boston. I will be both days at
the "Vermont House" on account
of its proximity to your Head
Quarters. I hope to be favored
from you specimens & value
the privilege you have kindly
extended. I shall probably
have little or no other business

in Ithica I will call on you
at my earliest convenience
after arrival.

I had the pleasure of adding
Viola hyperborea to the list
of my personal collections
on Mt. Ktaadn. I took but three
plants of it, the rest being in-
accessible or too far past maturity
to be good specimens. A
friend here gave me half a
dozen small sick plants of it
which I shall be happy to
share with you. I fear the plant
is growing scarce here. In one
place I found a single plant
of it, (the only plant I have),
with V. globella growing on
either side within four to
six feet.

Hoping for the pleasure of
seeing you at Ithica I am

Yours

Wm Starr

Ann Arbor Mich.

Sept 9th

only, scales ovate-acuminate & entire & stipes scattered on a slender creeping rhizome, are Hooker's plant.

Now, if we accept this as the true Ch. Fendleri then we San Jacinto Mt. & Cajon Pass, & similar plants, upper surface naked, lower scaly only, scales ovate or ovate-acuminate more or less ciliated about the base, & stipes tufted are not Ch. Fendleri, neither do they belong with either of our other species, but require a specific name to distinguish them.

Then we have Ch. myriophylla upper surface pilose-palaceous, lower densely matted & scaly,

New York, 7th Oct. 1879

Dear Mr. Davenport,

Yesterday I got from a florist, a plant of A. cordifolia & dug it up & found tubers on the wiry root-fibres. The plant agrees with your Indian River, D. Palmer, 1874, specimen. I have divided it & put it in press & will send you half of it when it is dry that you may see it for yourself. This seems to make it reasonably certa in that your Indian River plant is true A. Cordifolia, Desv. H.B.K. Syn. Fil. p. 300 - A. tuberosa, H.K. Sp. 4. p. 151.

I hope you will be able to satisfy yourself thoroughly as

to the authenticity of its credentials.

While I have my opinion in regard to the plant very confidently with my unscientific warmth, you must not infer that I am in the mood for an announcement of the plant before assurance has been made doubly sure, were that matter resting with me. And I know you will not make that move till you have fully satisfied yourself.

I have glanced over the Pelaea descriptions & do not find anything to fit Mr. Parish's plant & I think it is new. I will return the frond I have to you in a day or two with many thanks for it & the apology I owe for my forgetful eagerness. I can carry it well in my mind & prefer to wait till some of it comes to me in due time.

I will send with it a frond of Dr. Palmer's Arizona 1876. Ch. Fendleri, but shall have to retain the promised frond of Yosemite Ch. imprinted till I am through studying it.

My head is full of ferns. Since I got home I have been thinking over our scaly Cheil. & this & am not sure I have not found the solution of those species.

I think that Dr. Palmer's Arizona 1876 & plants like it, upper surface quite naked, lower scaly

scales subulate or lanceolate-
acuminate copiously ciliated
at the very base, a tomentum
of tangled hairs in & attached
to the segments under the scales,
& stipes tufted; & Ch. Cleve-
landii, upper surface naked,
lower scaly, oval, the lanceolate-
acuminate scales copious &
ciliated throughout; & with
stipes scattered on rather a
stout rhizome.

I have just written Prof. Eaton
substantially as above & solicit-
ing the privilege of an examin-
ation of his suit of specimens
so that I may determine whe-
ther there is anything in my
half-formed conviction, about

the plants now classed as
Ch. Fendleri or not. If a thorough examination of it's
specimens will make my
case good, it seems to me
the dispositions I suggest of
our plants, if not the elucidation of our troublesome
scaly Cheilanthus will be at
least a step toward it.
Please let me know in a word
when you write whether these
views strike you as having
more of reason or of absurdity in them.

I found all my Nephrolepis
from Miss Reynolds to be exaltata.

On the partial description of
N. cordifolia I left with you

as a memorandum please erase
the word "narrowly" & after the
words "ovate-acuminate" insert
long-pointed. I think it will
better the description of the scales.

Please forgive me this
long letter.

Yours

J. Pursh Stout

57 East 34th St.

Nephrolepis cordifolia. Presl.

Pinnæ close, often imbricated, closely sessile, oblong, obtuse, about 1 in. long, 3/8 in. @ 1/2 in. broad, the edge entire or slightly crenate serrate, cordate at the base on the lower side, on the upper side distinctly cordate & auricled overlapping the rachis; texture subcoriaceous; rachis clothed with minute, peltate, narrowly ovate-acuminate, squarrose scales; sori submedial, transverse or oblique; involucre reniform or nearly half moon-shaped opening toward the apex of the pinnæ.

N. exaltata. Schott.

Pinnæ approximate, sessile 1 1/2 in. @ 2 in. long, 1/2 in. @ 3/8 in. broad, oblong, more or less acuminated, the edge entire or crenate-serrate, the under side rounded at the base, the upper auricled & parallel with the rachis; texture herbaceous or subcoriaceous; surfaces somewhat glossy; rachis villoso-paleaceous; sori submarginal; involucre suborbicular & subpeltate.

New York, 9th Oct. 1879

Dear Mr. Davenport,

I will send by to-morrow's mail the proof of Dr. Palmer's Arizona, 1876. Ch. Fendleri & Mr. Parish's Mt. San Bernardino Pellaea.

I rec'd a very kind letter this morning from Prof. Eaton placing his specimens & books at my service. I am anxious to settle the question in my own mind whether our Ch. Fendleri plants are all one thing or not. I am sorry this idea did not occur to me

while in Boston when I had your bit of Arizona Rhizome to look at. I have noted some other distinctive characters which appear to be more less good but I cannot determine anything till I have access to Prof. Eaton's specimens. I do not feel altogether sanguine that I have a point here, but I think the thing is worth working up & the worst that can happen to me will be the advantage of having learned the truth.

I leave town to-morrow on business & will be absent 3 @ 4 days. I hope to go to New Haven next Tuesday or Wednesday. Bread & butter work must take precedence of love work.

I hope to be able to sift this Ch. Pendleri matter as thoroughly as I would like to & will report the result of my examinations when I get through.

Yours

J. Mc Stout

57 East 34th St.

MOSELEY'S NEW HAVEN HOUSE,

Fronting the Park. S. H. MOSELEY, Opposite Yale College.

NEW HAVEN, CONN.

16th Oct. 1879

Dear Mr. Davenport,

Your favor of 9th inst. I rec'd. on return home but had no time to answer it during my short stay in N.Y.

I came here yesterday afternoon & last evening Prof. Eaton called on me. He soon introduced the Nephrolepis subject & this morning he showed me his specimen of Dr. Palmer, Indian River, Fla. 1874. It was N. exaltata. It appears from this & the fact that your specimen is N. cordifolia while Mr. Taylor has both species from Dr. Palmer that he collected both species on the Indian River in 1874 & distributed them as one. I hope that at Cambridge, or with Mr Robinson,

or elsewhere, you may find more of Dr. Palmer's 1874 Ch. cuspidata.

This morning I looked over Prof. Eaton's Ch. Fendleri & find that I am correct in my idea of what is true Ch. Fendleri & I believe that so far Prof. E. agrees with me. Whether he will agree with me in the point I make that my San Jacinto Nat. Chrysanthus & similar plants are not Fendleri & require a specific name to distinguish them I cannot tell till I submit my case to him. I find Dr. Palmer's Arizona 1876, ~~[illegible]~~ with stipes scattered on a slender creeping rhizome which is clothed with reddish brown, chaffy scales not appressed, to be the true Ch. Fendleri. Now if this be accepted then I ought to have no trouble in co-

establishing that my Cal.a Chest.
anthes belong to a different +
unrecognized species. On the
face of it I seem to have a
good case. Whether Prof. Eaton
agree with me or not when
I have worked up the details,
(which I think will support me
well), I will submit them
to you. I would be very glad
to have your judgment on my
findings + conclusions.

I shall probably be here
till Tuesday next — perhaps
longer. I do not wish to af-
flict Prof. Eaton too sorely
but I have a great deal to
see + to learn + it will take
two or three days to work up
my Cheilanthes matter. If
you wish to write me within
three or four days address me here.

Thank you for the catalogues duly rec'd.

James Westland

MOSELEY'S NEW HAVEN HOUSE,

Fronting the Park. S. H. MOSELEY, Opposite Yale College.

NEW HAVEN, CONN.

20th Oct. 1879

Dear Mr. Davenport,

Your favr. of 18th Inst. was recd. to-day.

I saw Prof. Eaton this morning & he said the Nephrolepis you sent him was N. cordifolia. So I suppose my point was good had the locality not turned out to be dubious. But sorry you should have had the trouble of looking it up & be left in the end in uncomfortable doubt. However, a mistake has been corrected & if N. cordifolia ever turns up in Florida this little episode will probably recur to us.

~~You~~ The Chilanthes I am after cannot get away from me on the score of locality, nor, I believe, on any other score.

Mr. Parish's Pellaea seems nearer to
Wrightiana than any other species
but I do not know enough about
Wrightiana now to come to any con-
clusion. The pinnæ are more crowded
& the stalk (three times as long as
the frond) much longer than in any
Wrightiana I have seen. I hope
you will get a good lot of Mr.
P's plant & have ample suits
of Wrightiana to compare with.

I am very busy on the Chil-
anthes & will be here till Friday.
Will report at my earliest con-
venience after I get through.

With regards

Yours

Wm Stout

description will enable you to recognize the plant should any of it turn up on you, or you may find some of it at Cambridge if you look when you are visiting there some time. If you have or at any time get any of it I will be much obliged if you will send it to me or to Prof. Eaton & help me complete my case. (Some loose fronds of Clarkii, Arizona, 1866, seemed to be the same thing.) I care much more about establishing this species than the San J. & Cajon Pass case which is a much more obvious thing.

I have every reason to believe that Prof. Eaton will allow me my points in regard to the

New York, 27th Oct. 1879

Dear Mr. Davenport,

I returned from New Haven on 24th last thoroughly fagged out with close application, loss of sleep & previous hard work.

Of the things classed as Ch. Fendleri, Ch. myriophylla & Ch. Clevelandii I made five species & there were one or two things beside (too scant to determine) which seemed to suggest at least one more species.

I enclose a schedule of distinctive characters between the true Ch. Fendleri & the many Cheilanthus like my San Jacinto Mt. & Cajon plants which have so long & so strangely

heretofore conformed to it.

Of Dr. Palmer's Arizona 1876 collection of Cheilanthes (his 552 Ch. Fendleri & 553 Ch. myriophylla) I made three species, none of it being myriophylla, -1, 2, & 3. My #1 is Ch. Fendleri, #2, belongs with my Cajon Pass & similar Cheil. anthes & my #3. is a plant which I think is distinct from the latter & all our established species. I enclose a description of it to which I refer you.

You will see that it is distinct from Ch. Fendleri in its ultimate segments never being crenately 2-3 lobed, in its ciliated scales with tomentum or hairs in the segments under them & in the apex of the frond being acuminated. It is distinct from Ch. myriophylla in its glabrous upper surface & in its scattered stipes on a slender, creeping, or oblique, ascending rhizome — myriophylla having a short nodose caudex with stipes tufted. It is distinct from Ch. Clevelandii in having tomentum under its scales & in its slender rhizome clothed with light brown chaffy scales. And it is in every way distinct from the San Jacinto & Cajon Pass plants &, I think, a good new species. But, even should Prof. D. approve my findings & conclusions in regard to this plant, announcement of it is likely to remain in abeyance for want of sufficiently ample & complete specimens to make assurance doubly sure. The

& Lindley's Venezuelan C. Sections (Latin) & some specimens I was very glad to have. I gave him — crampo, I'm afraid.

I presume you recd. the cultivated specimen of A. cordifolia which was sent you while I was in New Haven.

With regards & best wishes

Yours

Wm Stout

57 East 3rd St

P.S. Will send the fronds of fragilis, myrii & glyptica, when I can collect one & shall try to get for you some fronds of Ch. candida with it.

W.

Jacinto Nat. & similar Cheilanthes & perhaps it will be a comfort to you to know that (if it don't happen to belong with some already established species, which is unlikely) it will have a description name.

Except to you I shall of course say nothing about my recent examination of our scaly Cheilanthes & its results. It is Prof. Eaton's matter now & it is proper to await his final disposition of my findings in his own time & way.

I think the establishment of the two species I propose will go far toward dispelling the scaly Cheilanthes fog. If

have been confused because we had more species than we had names.

Ch. Covillei I think a good species. About Ch. myriophylla I am not entirely satisfied, but Miss Pelton's Lake Co. Cal., my Yosemite & one or two other plants seem to be a small form which is at least allied to it. We need more ample & better specimens of our own plants & more light on the S. American ones. I know now what is Hooker's Ch. myriophylla but do not know whether it is the same as Desvaux!

Prof. Eaton treated me with the utmost kindness & courtesy

much better than I knew how to treat him, & I could not help feeling at disadvantage in that regard. I feel very uncomfortable in being so much in the attitude of questioning his judgment & can but deprecate my too direct manner of expressing my opinion when my mind is clear. My ~~only~~ comfort is that the facts have seemed to support me pretty well & ~~that~~ the hope that at length he may come to see that I feel more deference than I show. He gave me a copy of his "Ferns of the Southwest" & the "Botany of the Wheeler Expedition, Miss Wright's Cuban &

Distinctive characters between Ch. Fendleri & San Jacinto Mt., Cajon Pass & similar Chilanthes

Ch. Fendleri, Hooker

No. 1.- Rhizome slender, creeping, clothed with bright-brown, chaffy, oblong-ovate, acuminated, [illegible] scales.

No. 2.- Stalks scattered, clothed for about ½ in. from the base with scales like those of the rhizome & above with narrow, subulate, bristly, appressed scales; scales of the main & especially of the secondary rachises rather larger & less bristly & appressed, not ciliated.

No. 3. Scales covering the pinnules broadly ovate-acuminate, pale brown, entire or subentire, not ciliated & but little larger than the segments.

No. 4. Frond ovate-lanceolate, tripinnate.

No. 5.- Color pale green. (constant)

No. 6.- Pinnæ ovate-lanceolate

No. 7- Ult. segts broad-cuneate, the convex apex, often 2-3 lobed, much incurved & forming an involucre which completely covers the sporangia.

San J., Cajon Pass & similar Chilanthes

No. 1.- Rhizome short-creeping rather stout, oblique or ascending, clothed with nearly black, subulate or narrowly ovate-lanceolate, long pointed, rigid, appressed scales.

No. 2- Stalks tufted, clothed throughout, like the rachis, with chaffy, silvery-white, narrowly ovate-lanceolate, long pointed scales slightly ciliated at the base.

No. 3.- Scales covering the pinnules broadly ovate-acuminate, long pointed, ciliated at the base, much larger than the segments, white, or, in full or over maturity, grayish or, in some plants, reddish brown.

No. 4. Frond ovate-acuminate, tri-quadripinnate.

No. 5.- Color dark green. (constant)

No. 6. - Pinnæ subdeltoid or deltoid-lanceolate.

No. 7 - Ult. segts. beaded, subglobose or broadly obovate, never lobed, sporangia intramarginal, not hidden by the incurved margin forming the involucre.

Description of N. S.'s No. 3. of Dr. Palmer's No 553, Arizona, 1876. Chilanthes

Rhizome slender, creeping or oblique, clothed with ovate-lanceolate bright-brown, chaffy scales; stalks scattered clothed with very slender appressed scales; frond oblong-lanceolate, acuminated at the apex, pale green, smooth above, below scaly & tomentose, quadri-pinnate; lower pinnæ stalked, lanceolate; pinnules oblong-ovate, the lower ones slightly branched, clothed beneath with ovate-acuminate or ovate-lanceolate, acuminated, long pointed, scales ciliated throughout & also with a usually

scanty tomentum of branched hairs or very minutes scales (2-3 cells wide) with copious long cilia; ultimate segments small, with cuneate base, apex convex & entire, the much incurved margin forming the involucre.

New York, 31st Oct. 1879

Dear Mr. Davenport,

Yours of 27th inst. was duly rec'd.

As to the C. Fendleri matter I cannot help counting confidently on your agreeing with me. I think when you have compared Dr Palmer's Arizona & Prof. Brandegee's Colorado plants with Hooker's description, (Sp. Fil. 2 vol. p. 103) you will conclude that they are true C. Fendleri. Then, if you accept these, I think the fact that my Cajon Pass & similar Cheilanthes are not Fendleri will be manifest almost at a glance. Besides the

I have put up for you some C. tomentosa & C. Clevelandii in compliance with your request & have added a little N. Parryi & A. canticola from S. If there are other things you need now please specify them & I will send such as I have as soon as I can. Perhaps in the course of a few months if I get time to go through my packages I may be able to lay out a lot of stuff that may be of some use to you. I have a great deal of work ahead of me in getting my accumulations into the shape of an incipient herbarium.

Am obliged for Mr. Williamson's address. Did you forget to send Mr. Howell's, Mrs. Austin's &c &c? Did you not feel at liberty to give them? Yours Mr. Stout, of Easton?

I have ...ted Prof. Eaton had some of C. Wright's 2,126. collection of N. Mex. 1851-52 which came to him, I believe, from Kew as Ch. Fendleri. This & several similar plants seemed to make the point as to what was true Fendleri very clear. This being established the rest of my case seemed obvious on the face of it.

I would be glad to see a specimen of Fendler's 1,015 - N. Mex 1847 - & I hope they may have some at Kew to spare you. I would be glad of a copy of Desvaux's description of Ch. myriophylla & I hope you will succeed in getting it.

It will give me pleasure to send you the specimens of my San Jacinto Mt. & Cajon Pass Cheilanthes you desire for Kew as soon as I am at liberty to distribute any of it & can accompany it with a name. Pending Prof. Eaton's final & authoritative action in regard to them I feel tied up, & I presume you would not be willing yourself to send them to Kew in the interval between losing this old, erroneous name & receiving a new one. Anything else I can do that you would like to send to Dr. Hooker & Mr. Baker call upon me freely for.

New York, 5th Nov. 1879

Dear Mr. Davenport,

Your favor of 3d inst. was recd. this morning.

I think when you come to examine critically the Cajou Pico & similar Cheilanthes that you will find them distinct from true Ch. Fendleri in almost or quite every character throughout the plants. Beyond belonging to the same genus they seem to me to have substantially nothing in common.

Am very much obliged for the addresses

kindly given me. I shall at once avail myself of two or three of them.

I will write Mr. Howell for herbarium specimens of his Lomarias in which I feel quite an interest & when I can, will study up the genus a little from my New Zealand & West Indian specimens of which I have many species.

I was unable to get off my package for you till 3d. Inst. & then thoughtlessly committed the mistake of sending written tickets with the specimens under cheap postage. I hope you have received them all right, however.

With regards & best wishes

Yours

Mr Stout

57 East 34th St.

New York, 10th Nov. 1879

Dear Mr. Davenport,

Am much obliged for your interesting letter of 6th Inst. rec'd. on the 8th.

I would like very much to visit the Cambridge herbarium & if circumstances favor will try & do so next year. What you say of the modifications of rhizome exhibited in the different specimens of A. Pendleri only shows the necessity of having an abundance of specimens of any given plant in order to get an intelligent idea of it. Under it

edly much of the confusion of authors in regard to species is due to descriptions having been founded on meagre & incomplete specimens as well as ~~descriptions~~ to superficial examinations. Hooker, however, probably had ample & complete specimens from Fendler & his "caudex creeping, scaly, stipites sparse scattered" was probably characteristic of the plant.

I presume you will have to wait till next May or June for such specimens as you need of Mr. Parish's Pellæa.

Am much obliged to Mr. C. S. White's Florida address. I have lately rec'd from Dr. Garber about everything, (I suppose), including phanerogams, he has collected in Florida & my wants are now restricted to a few ferns - Aspl. pinnum, A. myriophyllum, A. cicutarium & Pteris cretica & I am trying to get them from Miss Reynolds & Mr. Curtiss.

When you write again please let me know whether you rec'd the last package I sent. If not I will put up another for you.

Have not been able to do much work of late.

Yours

Jno Stout.

57 East 34th St.

P.S. I was wrong in pronouncing the word stipe stī-pe.

New York, 13th Nov. 1879

Dear Mr. Davenport,

Yours of [illegible] was rec.d this morning. I am glad you have Dr. Palmer's 552 & 553, including my #3, to examine & hope you have all there is of the latter. I see two loose fronds, one with a bit of rhizome, & several fronds mounted of which the best developed & best condition.ed was the one in the upper right hand corner of the card. The card was subsequently cut up in order to separate the mixed specimens. I showed Prof. Eaton under my microscope a scale & a branched hair (in

of course I would be much interested in a report of your examinations of the scale, Chilanthes & would especially like to know whether your findings & conclusions in regard to my #3 of Dr. Palmer's [illegible] specimens agree with mine.

Am obliged for the Pellaea frond you enclosed, but you did not say what it was or where it was from. I presume it is of the last lot you received from [illegible]. It does not seem to be the same thing as the plant with rounded pinnae & stipe three times as long as the frond. It looks like undeveloped Ornithopus — the spurious P. Wrightiana from Cal.a. I don't suppose you like guessing at scraps better than I do & I would suggest that you tell Mr Parish in the polite language of Cal.a that you need "dead loads" of entire plant for accurate analyses.

Yours truly

place, where it widened [illegible] two cells wide) which were taken from the loose frond with [illegible] gone. The latter I got with great difficulty, detaching it from one of the cup-like segments after removing the overlying ciliated scales. I worked on the frond under a magnifying glass & with a needle with point slightly hooked. I also showed him several very minute scales (2-3 cells wide) with copious long cilia taken from one of the segments of the upper right hand commune mounted frond. I had so much trouble to get these hairs or scales that I kept them between plates of gl[illegible] & showed them to Prof. Eaton so that he might see what I had found without trouble to himself. My impression is that these minute scales were generally, if not always, but one cell wide at point of attachment widening above into a scale with long cilia radiating in all directions. I did not have time to do all the work I would like to have done on this plant, & sometimes I could only glance at superficially. Among the latter was a Cheilanthes from Mt. Diablo (Dr. Gibbons), a single frond with a fragment of rhizome, which looked much like C. Clevelandii. A few days ago I wrote Prof. Eaton for Dr. Gibbons' address that I might try & get some of the plant & examine it.

Miss Pelton's Yuba Co. Cheilanthes I do not know

5th East 34th St.

New York, 22d Nov. 1879

Dear L. C. Bruce,

I write to night only to thank you for your favor of yesterday's date in regard to the Ch. Calloleptis matter, for, as you promise to give me your views more fully soon, I will not now enter upon premature discussion of the question. I will only add that as I had counted confidently on your agreeing with me in this case your rejection of the species was a complete surprise to me.

Yours Truly

New York, 26th Nov. 1879

Dear Mr. Davenport,

Your favor of 24th inst. was rec'd. yesterday. I shall be happy to examine the Chilanthes you are getting together at my earliest leisure after their receipt. I hope you have the abundance of botanically complete specimens required for the founding of an intelligent opinion. I would be very glad to see all the Cambridge specimens, including Fendler's No. 1015, N. Mex. 1847, & hope you

may be able to procure the
loan of them. Packed carefully
& sent by express I think
they would go through Prof.
Eaton's hands & mine without
detriment & be safely returned
in due time. I like to have
an abundance of material
&, as we are a good way apart
in our judgments, I think
you must have seen some-
thing very different from what
I have & would like very much
to see all the plants you
have had access to.
With regards & best wishes
Yours
Wm Stout
57 East 34th St.

57 East 34th St.
New York, 19th Dec. 1879

Dear Mr. Davenport,

I will send you by to-morrow's mail a copy of a revised Index to Hooker & Baker's "Synopsis Filicum", one of a number imported for me recently through Messrs Dodd, Mead & Co. 751 Broadway, N. Y.

I think it will be useful to people who do much fern work, as a herbarium catalogue & in the saving of trouble in making manuscript lists in important exchanges of foreign ferns &c, & have sent a copy of it

to Mr. Leggett, suggesting that, if it commended itself to him, he might notice the publication briefly, in the "Torrey Bulletin" for the sake of such pteridologists as might wish to procure it,

I have for a long time been expecting to hear further from you in regard to the Pendleri callolepis matter. Is anything the matter?

Yours

W. Trelease

the fragments mixed o[illegible] me-
way confused. It does not seem
to me that you could ever have
any trouble in readily distin-
guishing entire plants of what
I call callolepis from what
I call Fendleri.

Doubtless in the end the truth
will prevail & I hope that at
length we may all be agreed
that the plant is Fendleri, nuy-
sioptigilla or callolepis as may
be right. I am anxious to find
out wherein I am wrong, but
I have not yet been shown evi-
dence which proves me wrong
&, believing I am right, I appeal
to the plants as against the di-
vided opinion of the authorities.

I am very sorry you have trouble
with your eyes or, indeed, trouble of any
kind.

Yours [illegible]

57 East 34th St.

New York, 9th Jany 1880

Dear Mr. Davenport,

I am
obliged for your favor of 2d
Inst. which was duly rec'd.

I have delayed answering
partly because I have been very
busy & partly hoping to hear
something direct from Prof.
Eaton as to his final disposi-
tion of the Ch. callolepis mat-
ter. But as I have given him
my views fully, claiming the
plant to be specifically dis-
tinct from all established
species, &, declining to pub-
lish the species myself, left

him to treat the matter as he thought best in "Ferns of N. Am," I may hear nothing from him further in regard to it.

I should be very sorry to see him place the plant with Ch. nuxiophylla, believing that in doing so he would correct one error only to fall into another as grave. I have studied the plant faithfully & do not see that it partakes of the organism of any established species & have worked hard to have it assigned to what seems to me to be its proper place. But if Prof. Eaton now refers it to nuxiophylla I can't see that mine is going ed for botany. Somebody is wrong. Who?

I hope in time to get the original description of Ch. nuxiophylla & elegans & ample & proper specimens for study when, in view of what Prof. Eaton has written you, I will examine calloleps more than I have yet done & carefully as to possible relation to that group.

Being unable to account for your clinging to the opinion that the Californian plant belongs with Fendleri in any other way, I have thought it possible that, since you wrote me that you had to[illegible] some "bits" from the Cambridge specimens to study, that you might [illegible]

Fendleri. There does not seem to me to be any place to draw a line which would exclude it. Perhaps you are prepared to do this, for I cannot see that Clevelandii is distinct from Fendleri or callolepis in more characters than they are from each other.

As far as my examinations have gone I have uniformly found that the scales covering the pinnules of all. segts. in Fendleri were subtentially entire, while those of callolepis were ciliated at the base & in Clevelandii & in my #3 of Dr. Palmer's Arizona Cheilanthes ciliated throughout.

I claim that I can easily determine Fendleri from callolepis by these scales alone & those plants again from either Clevelandii or Dr. Palmer's plant. If this can readily & reliably be done is not good distinctive character in the scales of these plants? I cannot doubtful

57 East 34th St.
Newyork, Jany 30/80

Dear Mr. Davenport,

Your favor of 18th Inst. was received last evening. I was glad to hear from you & to learn that your eyes do not trouble you to an extent which entirely precludes fern-work. Of course I shall be glad to see, when convenient, your material & to hear any arguments you may urge in support of any opinion you may hold or may form in regard to the Fendleri-callolepis question.

I had intended to defer any extended reply till you submitted your full case but, as you seem still to be at work upon it, & the final report is likely to be deferred

till I may be obliged to defer giving it my attention till I return from the South, I will write you partially in reply to some of the objections you made to the proposed new species in your previous letters.

First let me state that in all the Fendleri I examined in Prof. Gray's herbarium, and in the specimens I now have from Colorado, New Mexico & Arizona in my own, I have noticed no suggestion of the rhizome of callolepis. In the many specimens I have seen I could always determine them by their rhizomes alone. The rhizome in Fendleri has always been slender, covered with light brown scales, stipes scattered, & in callolepis, as uniformly, the rhizome has been stout, covered with appressed, nearly rigid, nearly black scales, with tufted stipes. I have ample specimens of these two plants & am in no wise, therefore, in the dark about them & ought to be able to get at the truth.

I think in your ruling that there is no good difference in the rhizome of these two plants, throwing together plants with a slender creeping rhizome with laxly, bright-brown scales & scattered stipes, & one with a stouter rhizome covered with appressed, rigid, nearly black scales & with tufted stipes, & throwing together plants with the scales of the frond entire (Fendleri), scales ciliated at the base, (Callolepis) & scales ciliated throughout (my #3 of Dr. Palmer), thus virtually taking the position that there is no good distinction found in the scales of plants,

I think that, under the above ruling, you would be compelled to include Th. Clevelandii with your

enough to establish definitely what it is.

I am sure that Calolepis does not belong with nuciophylla nor with our plant or plants which have been referred to that species. I am in hopes of getting some plants which may give me a gleam of light upon our so-called nuciophylla. Undoubtedly we have a plant which is somewhat allied to nuciophylla but at present I incline to doubt if we have anything which is not specifically distinct from it. I have not now in my herbarium the specimens necessary to the forming of a clear opinion. I very much want ample specimens of our own little plant & some of the S.C. true nuciophylla.

I enclose a copy of Desvaux's descriptions of his nuciophylla & elegans. They are very meagre & my correspondent writes "I do not think the two accompanying figures could possibly help you much."

I hope we may get to the bottom soon of the Cheilanthes questions & at last be agreed about them. With regards, Yours truly Short

5

specimens of Aspl. parvulum & C. ebeneum be determined by examination of their rootstock scales & also mutilated & doubtful plants of P. Plumula & P. pectinatum in the same way? (I applied this distinctive character in the latter instance with advantage to Capt. Smith's Lake Astachula specimens) I hold that when a sufficient difference in the structure of the scales of two plants exists to make them always easily distinguishable by them, that the character is just as good as exists where scales are present in one plant & absent in another, as in Ch. Eatoni & Ch. tomentosa.

I do not think that the finding, as you claim, of a few scales on Pendleri approaching those of Calolepis

& vice versa, does away with the incontrovertible fact that the characteristic scale of the pinnules of Pendleri is entire & of its rhizome chaffy & reddish-brown & that the characteristic scale of the Callolepis frond is ciliated at the base & of its rhizome appressed, rigid & nearly black.

Another character I think good is that the Pendleri stipe carries two kinds of scales both different in structure &c from the single kind borne by the stipe of Callolepis.

Another good distinctive character is in the shape of the ultimate segments of the two plants & without mentioning other minor ones, I will merely add that I contend for every distinctive character laid down in my schedule. The plants seem to me to be distinct, substantially, in every character throughout their organisms & I am sure that I can accurately determine them by the merest fragments of well-conditioned plants; - by the rhizomes alone, the stipes alone, the scales of the fronds alone, the fronds entirely denuded of scales & the ultimate segments alone.

I cannot but think that ultimately Callolepis will take its place among established & accepted species. If I am wrong in my view I will be very thankful to you if you will kindly show me wherein I am wrong.

P.S. to my #3 of D. Palmer's collection. I forgot to say that I found tomentum on the scales of the frond with rhizome if you did not (it was scant however) & noted some other differences between it & Pendleri which you either did not note or did not regard. I think my #3 will probably turn out a good species some day, when we [illegible]

Desv. in Journ. de Bot. Appliq. 1813. II

Cheilanthes élégans, Desv. Pl. XIII, fig. 2. (Pt. 48 bis)

Stipitibus rachibusque hirsutis, frondibus quadripinnatis, subtus rufescentibus lanuginoso-squamosis, pinnis primariis infra dilatatis, secundariis linear-lanceolatis, pinnulis tri-quinquefoliis, ultimis simplicibus, laciniis ovatis stipitatis. Habitat in Chili.

Cheilanthes myriophylla, Desv. Pl. XIII. fig. 1. (Pt. 44 bis)

Stipitibus rachibusque hirsutis; frondibus quadripinnatis subtus albescentibus squamosis, laciniis orbiculatis subsessilibus. Habitat in America australe.

Les deux espèces ont beaucoup de rapport; elles s'éloignent des espèces connues par la petitesse de leurs feuilles; qui ont à peine un sixième de ligne de diamètre.

that course when I talked with him about it & I quite approved his prudence. I have sent a description of the plant to Mr. Brandegee & hope he may meet with it.

When I examined Prof. Eaton's specimens last Fall &, at his request, marked my analyses, I saw two specimens labeled C. Wright - 2.126 - sed., I think from Kew, as Ch. Pendleri. One, a full plant, was good Pendleri & the other, a single frond I think, I rejected as Pendleri. Prof. Eaton had, & found, Lindsay marked the latter with a question mark.

I do not know what the Cambridge specimen is. If it has ciliated scales, as I suspect from the connection in which you mention it, it is possible that C. Wright's Pendleri was mixed & two plants, superficially alike, have been distributed as one. I am a very wicked man & do not care a fig

57 East 34th St.

New York, 24th Jany 1880

Dear Prof. Davenport,

I was very glad to receive this morning your letter of 22d. Inst. I understand better now the exact nature of the difference of opinion between us on the Pendleri-Callolepis question. Since you say "there is no difference between us as to the actual existence of the characters you have pointed out", I do not despair of our being at length substantially agreed as to the value of those characters.

I have noticed differences in Pendleri from different localities, & also in Callolepis from different localities, but I have never seen

any plants which seemed (to me) to connect them.

I should like much to see the Cambridge specimens & may perhaps make a pilgrimage there next Summer or Fall for that purpose.

I am making every effort to obtain specimens of the S. Am. true myriophylla & of our own little myriophylla (?), & wish you all success in yours. We are necessarily much in the fog for want of specimens.

The only hurry I have been in with regard to the scaly Lauthus questions was to get what light we could about them in time for Prof. Eaton's spec. &c in forming his opinions about to be published in his "Ferns of N. Am." As an American I would like to see our american plants assigned, in this authoritative work by an American botanist, to their proper place. And perhaps he has assigned, or will so assign them. I am sorry I do not agree with him in the disposition of callolepis proposed & shall do my best to find out wherein I am wrong. I hope, for botany's sake, that he is right.

I doubt if he does anything with my #3 of Dr. Palmer's collections in his Fern Book. The plant is not in distribution & he has so meagre a specimen himself that I presume he will let it remain in abeyance. He suggested

for labels when the plants con-
fute them, even though they
come from Kew. You must
know that I rec'd a serious
shock when I found that there
was no botanical Pope &, in
consequence, have become a
monstrous botanical skeptic.
Perhaps this may account for the
seemingly inordinate & immodest
confidence I have in my own
opinion in cases where my
mind is clear after consulting
the plants. I believe the truth
is to be gotten only from the
plants. I think I am right
in listening to the plants first
& with confidence, to authorities
next & always more or less doubt-
ing.

Yours
Gray

dense tuft. Each of these little rodocities seems to be composed of embryo fronds. I do not see how the plant, which for convenience sake I will still call *Calolepis*, with a creeping, often dichotomous, rhizome, the stipes proceeding obliquely from its side or along its length, (other distinctive characters aside), can belong here. One other little Californian plant, which has a pilose upper surface & tomentum under its scales, I also suspect to be distinct from *nuginophylla* in its rhizome, but am not as yet fully assured for want of proper specimens.

Should you come to the conclusion that *Calolepis* is distinct from Pendleri & please you will acquaint Prof. Eaton promptly with your change of opinion. Yours Most Sincerely

57 East 34th St.

New York, 29th Jany 1883

Dear Mr. Davenport,

I was very glad to receive yours of 28th inst. yesterday.

I shall be glad to see your notes on our scaly Cheilanthes when you are quite prepared & also the material on which your opinions are based, which please send, if you can temporarily spare it, with the notes by express at my expense. It is uncertain when I shall go South, probably some time after the middle of next month, but it may not go at all. Will let you know when I have any definite programme & meanwhile thank you for your

kindly offer of useful notes.

I would like to know, when you write again, whether the specimen of C. wrightii 2,126 in the Cambridge herbarium has ciliated scales. My recollection is rather dim about why I rejected one of Prof. Eaton's C. Wr. 2,126 specimens as Fendleri, but I think it was because it had ciliated scales. Being but a pound or two without rhizome & gummed to its card I could tell little more about it. If the scales of the Cambridge specimen are ciliated & the plant well-conditioned & botanically complete you may find other characters in it which separate it from Fendleri. I would like very much to see all the Cambridge scaly Cheilanthes.

I, too, in my extremity for material presumed a cultivated plant of Ch. elegans & dug it up — partly to assure myself in regard to my recollection of Pringle's Santa Martha plant (which I have accepted as the true Ch. myriophylla, & shall, until I am better informed, use that type as the standard by which to compare our own plants), in Prof. Eaton's herbarium.

I have made no close study of the rootstock of Ch. elegans — only enough to satisfy myself that I have seen nothing from within our limits which is like it. I found it very peculiar & interesting — the new growth from the short erect caudex forming a cluster of little knots from which the stipes grow perpendicularly in a

57 East 34th St.
New York, 23d. Feby 1880

Dear Mr. Davenport,

I am obliged for your letter of 19th Inst. which was rec'd. on 21st Inst.

Am sorry to learn that you have been unwell & that you have devoted so much time to the Cheilanthes questions without coming to a conclusion more satisfying to yourself; for though you adhere to your position I infer that you do not feel quite comfortable in it.

In regard to the Pendleri-calloglypis matter I think, if my case is good at all, it is good upon the face of it — in many of the distinctive characters are obvious.

to get a lot of it & if you will send me some I'll send you some nice things for it.

I have rec'd. lately two rec'd. one of about 240 & the other 300 species, of Indian ferns giving me 350 to 400 distinct species from the Himalayas, Bengal, Ceylon &c. Of course I have been busy & am somewhat the worse for overwork & want of sleep.

I think your idea of leaving the Cheilanthes questions alone for a while is a good one. Perhaps you may have already studied them too deeply & if so it will be well to drop the subject until you can take it up fresh.

Yours Truly
W. Stout

then nicer investigation supports the case well. I doubt if you ever come to the conclusion that callolepis is distinct from Fendleri unless you come to regard these obvious characters as good. As far as my observation goes they hold good. I have not seen any plants in which the two things seem to approach each other & my own mind is quite clear that they are abundantly distinct.

Virginiophylla I know but little about & must await the accumulation of proper material before I can come to any definite opinion. I am curious to see what Prof. Eaton says to the species & of our plants which he places I. c.

I shall be glad to see your notes & also any specimens you may have to submit.

I have rec'd some L. Spicant & its var. serratum from Mr. Howell without roots. I hope to get more & better specimens next season. From what I can see now the reduction of the lower pinnæ is variable in the typical plant & the variety, serrated & thinner in texture, is not more than a good variety.

Am glad to hear of your Ch. viscida & hope the promise of more will be amply fulfilled. I suppose you correspondent knows that April will probably be the best time to collect Equisetum specimens. Tell him

I wrote Miss R. about it's plants & ordered more of the Aspl. thijopphyllum (?) but have not rec'd it yet. I inquired whether she had sent any of the latter to Prof. Eaton who, I guess, had not seen this plant from Florida when he wrote his text on Aspl. myriophyllum for his "Ferns of N.A." I wish I had a spare plant to send you now, but very likely you already have it.

How sorry your eyes trouble you so much & was getting quite uneasy about you, the promised notes were so long delayed.

I have been working hard, too hard, on my E. st Indian ferns. It is so late in the season now that I shall probably not go South this season. Yours truly Stout.

57 East 34th St.

New York, 18th March, 1883

Dear Mr: Davenport,

Your favor of 15th inst., with notes & specimens, was rec'd yesterday.

I am much obliged for the fronds of Ch. viscida which I am very glad to get. About the last of April or early in May, according to when the rain cease, will be the time to get this plant in its best condition.

Please accept my thanks for sending me your notes on the Cambridge specimens of Ch. Fendleri & the Kew specimens of Ch. myriophylla to look at. I will return the specimens & notes by express in a day or two.

I have read the notes carefully + with interest, but not without feeling the need of seeing the specimens they refer to. I have copied some of them.

There could probably be little profit in further argument between us about these Cheilanthes, but, since you do not find any satisfactory distinction in the scales, I will merely submit for your consideration the proposition that Calliolepis would be specifically distinct from Fendleri if both plants were scaleless. But perhaps you have already considered the question from this point of view.

Did I write you that the [illegible] specimen of Woodsia hyperborea, legit C. G. Pringle, that I gave you when in Boston as from Smuggler's Notch, Vt. should be credited to Willoughby, Vt.?

I rec'd from Miss Reynolds but three weeks ago "two forms of Aspl. myriophyllum" from near Ocala, Fla. One of the plants I thought good A. myriophyllum but I doubt if the other could be properly called so. It is probably a form of Aspl. rhizophyllum or one of the other plants united with that species by Baker — at unlikely the A. cladolepton of [illegible]. I have not the facilities at hand for precise identification

57 East 34th St.
Newyork, 25th March 1880

Dear Mr. Davenport,

Your postal was rec'd. yesterday.

It is not because I regard Miss Reynolds two plants as distinct species that I doubt the propriety of calling them "two forms of A. myriophyllum, Desl." I do not so regard them. But if the more compound plant is Desl. myriophyllum then, I think, the coarser & less divided one is not; & this may be true without their being specifically distinct. And as Hk & Baker have adopted Aspl. rhizophyllum, Kze &c., as the

typical plant, uniting with it as varieties several allied species of other authors, & as I know of no reason to contest that classification, I prefer to follow it & would, therefore, if the plants must be called by one name, rather call them Aspl. rhizophyllum, Kunze, than of A. myriophyllum, Presl, as the former name includes all the forms or varieties & the latter represents but one.

I will send you by mail a specimen of Aspl. strictum, Brackenridge, from Jamaica, another of the plants referred to Aspl. rhizophyllum, Kunze, by Hk & Baker. There is manifestly a strong specific alliance between the three forms I now have. I do not know just what is typical rhizophyllum, but guess that Miss Rio coarser & less divided plant is not far from it. Perhaps within the year I may get more plant from Jamaica & more light on Aspl. rhizophyllum.

I doubt if there is really any difference of opinion between us about these Asplenioums. Am very glad to learn that your eyes are improving. With best wishes

Yours

W. M. Stout

57 East 34th St.

New York, 16th April 1880

Dear Mr. Davenport,

Yours of yesterday was rec'd this morning.

I believe I have found one or two of Scott's mines from a cultivated plant but my sister, who is now out of town, has lately taken charge of the cultivated stuff & I do not know where she has put it.

I expect her return early next week & will then send you what I have.

I am glad to see that I
were forms have turned up
as I would like to know
in time more about them.

I am also glad to
see [illegible] thanks to
notes at your convenience,

With regards

Yours
[illegible]

57 East 34th St.

New York, 21st April 1880

Dear Mr. Davenport,

My sister returned home to-day & I send the specimens of Woth. nivea by this mail hoping they may be useful. Retain a frond or two if you wish, returning me one of them when you are quite through with it. I only value these cultivated things so long as I am without specimens from their native habitats.

Yours

Wm Stout

57 East 34th St.
New York. 27th April/80

Dear Mr. Davenport,

Your favor of yesterday & the A. nivea are at hand.

The attaching of Prof. Gray's name to your new fern has my hearty approval, notwithstanding my general preference for descriptive names. I am very glad to hear of both. Gray & Davenport. Am very busy.

Yours

J. W. Stout

57 East 54th St.

New York, 5th May 1883

Dear Mr. Davenport,

Yours of yesterday was rec'd this morn-ing. Now that Prof. Eaton has taken his position on the "calloleji" matter of course I have no objection to the case being referred to the authorities at Kew. I have sent you to-day by express the best specimens I now have of my Cajon Pass & San Jacinto Mt. collections without going into those I wish to retain in my own herbarium & need to support my opinion of the plant. My herbarium

by next mail at my expense. I shall be very glad to hear what Mr. Baker has to say & should very likely have carried the case to Kew myself if you had not anticipated me. I have done a good deal of work on these Cheilanthes & am somewhat anxious to find out whether I have any discriminating judgment in fern matters or not. You see this is a test case with me.

Am much obliged for the promise of the Ch. viscida.

With regards & best wishes

Yours

Jas Stout

tickets accompanying the specimens indicate my views concerning them & while I feel justified in taking the position I do, I cannot help regretting very much that we are not in accord about them. Except to go to Kew I should not part with the specimens, preferring not to distribute under existing circumstances, but, parting with them, I cannot let them go from my herbarium either as Ch. Fendleri, Hooker or Ch. myriophylla, Desvaux.

In regard to this plant I have come to a point where I prefer to be responsible for my own mistakes. I did not get any light from Prof. Eaton's diagnosis & description of Ch. myriophylla & am as much at loss as ever to account for his disposition of the proposed Callolepis. When Prof. Eaton describes a single species his diagnosis is clear & admirable, but I think his Ch. myriophylla bears abundant evidences of being compounded of two or three plants & consequently uncertitude. So my faith in Callolepis being a good species remains unshaken.

I hope the specimens will reach you in time to include in your package; if not, please forward them

57 East 34th St.
New York, 14th May 1880

Dear Mr. Davenport,

Your favor of 11th inst. was duly rec'd. I am very much obliged for your revised notes on the Cambridge specimens. They seem much clearer to me than the former ones & are the next best thing to seeing the specimens themselves. I am very glad, too, to have Prof. Eaton's markings of them.

I suppose we shall know, in the course of two or three months, what the Kew authorities think of our scaly Cheilanthes - at least we shall have the first was that so distinct a plant, as I on examination found "calolepis" to be, should ever have been confused with Pendleri. The second was when you insisted that it was Pendleri & the third was when Prof. Eaton bundled it in with my nivphylla. Altogether I feel that I have had a very strange experience.

Since I saw you last Fall I have done all the fern work I have had time & strength for, working principally on foreign ferns. I have not discovered any signs lately of your giving it up. - With best wishes

Yours

their solution of the "Pendleri-
calcolepis-myriophylla" ques-
tion. I had intended, when
I could get the necessary
specimens together, to send
to Kew ample, well-condition-
ed specimens of what I call
Ch. Pendleri, Vk, and ~~with~~ specimens
of the proposed calcolepis, with
a schedule, substantially the
same as that I gave you, of
the distinctive characters be-
tween them. And in view of
Prof. Eaton's throwing the latter
plant into C. myriophylla Desv.
I should have drawn up a few
brief notes on the distinctions
between them. I meant also to
send fine specimens of Ch.
Pendleri & any others of our
scaly Cheilan-s I could get
hold of. I am most anxious
to get ample, botanically com-
plete specimens of the little
Californian plant which has
a pilose upper surface & tomen-
tum under its scales & also
of my "#3 of Dr. Palmer, Arizo-
na" so that I may know
what that amounts to.
Did you send any well con-
ditioned Colorado Ch. Pendleri
in your bundle? I cannot
help feeling very confident
that in the "calcolepis" question
I have the plants on my side,
& I shall get one more sur-
prise if the Kew verdict is
against me. I have had three
& may have to stand another.

57 East 34th St.

New York, 7th June 1880

Dear Mr. Davenport.

Your supplementary notes on Ch. Fendleri &c were rec'd this morning & I am much obliged for them.

As I quite agree with you in dissenting from Prof. Eaton's uniting the plants which he has lately removed from Ch. Fendleri with Ch. myriophylla there seems no reason for discussing his classification further. On the other hand I agree with him that they should be removed from Fendleri.

I have done no work on

seems to me to be distinct substantially in every character throughout its organisms.

In your notes upon these plants you have only considered the scales. I think the difference in the structure of the ultimate segments of the two plants is too strongly marked a character to be safely ignored; those of Fendleri having a cuneate base & convex apex, the latter often (especially in the terminal segments) crenately trilobed, while the segments of calloleptis are roundish & beadlike. Reference to the schedule of distinctive characters I gave you last Fall will show citing additional characters here.

scaly Cheilanthes for a long time past & do not feel that I can do so profitably till I get in new material. I have written Miss Pelton recently soliciting some of her specimens & am trying to get an abundant supply of Colorado C. Fendleri.

As to the classification of Ch. Fendleri you suggest, separating the plants to you would place them into three varieties, I think it is better than bundling the plants together indiscriminately as Ch. Fendleri, (after the manner of Prof. Eaton's Ch. myriophylla) but it does not commend itself to me further than that.

Your var. A is all right. We are agreed as to what is typical Fendleri & this gives me some hope that we may be agreed as to the other plants sooner or later.

Your B — var. ciliata, I take to be the Arizonian plant — my #3 of Dr. Palmer — scales of fronds copiously ciliated throughout & shigone like that of true Fendleri. Of this plant the specimens are so meagre as I doubt if it is prudent to make any disposition of it until more ample specimens shall give us fuller knowledge. My impression is it will prove to be a good species.

Your C — var. callolepis, I cannot find is in any way specifically allied to Ch. Fendleri. It

Your Ch. Fendleri as it stands now (var's. A, B, & C.) includes plants with a slender, wide-creeping rhizome covered with ~~pale~~ bright-brown, chaffy scales & ~~a plant too~~ stipes ~~c~~scattered or approximate, & a plant with a stouter, short-creeping rhizome with stipes more or less crowded or tufted, the rhizome clothed with narrow, rigid, nearly black, appressed scales; and the scales of the fronds of the various plants range from subentire in A, ciliated at the base in C, to ciliated throughout in B. To be consistent but I think you would under these rulings be compelled to unite C. Clevelandii with

Your Fendleri, for I do not see where you have left a space to draw a line which would exclude it.

Your Ch. Fendleri, like Prof. Eaton's Ch. myriophylla, is too broad a botany for me. Both of you cannot be right.

Our scaly Cheilanthes will remain in confusion as long as we have more distinct plants than we have established species. I believe that the disposition of the plants & I favor will at least clear up a part of the fog. The specimens I have examined have left my mind very clear & it will take new material to change my opinion. I would like to go over the Cambridge specimens with you.

Yours Mustout.

57 East 34th St.

New York, 17th June, 1881

Dear Mr. Davenport,

Your favor of 15th inst. was received this morning.

I have stricken out the word "slender" from your supplementary notes as you advised.

I have just been glancing over my schedule of distinctive characters between Ch. Fundulus & "callolepis" & will be obliged if you will strike out the word "crispus" from my description of the rhizome scale of Fundulus & interline the words short creeping in my

description of the "calloleptis" rhizome.

I do not know why Mr. Baker should hesitate to give his opinion about our scaly Cheilanthus & I hope he will not. My own idea is that botany is neither personal nor national & I believe the interests of the science will be best served by the free discussion & interchange of opinions which that standpoint admits.

Am much obliged for Mr. Rusby's address. Will write him.

I am indebted to Capt. John Donnell Smith for a good specimen of his new Florida find - A. contrarium.

Am glad the "Torrey Bulletin" satisfied your request for a plate of Goth. Grayi.

With regards & best wishes

Yours

Wm Stout

rhizomes & other characters more
in accord with it. Do not
this true? And, if so, am I
not justified in calling upon
you to take in Clevelandii
with the plants you propose
to unite as Fendleri?

Under your opinion & mine
that Z. Bigynophylla
should include Clevelandii,
we would then have Fendleri,
callolepis, your var. ciliata,
Clevelandii & bigynophylla
all united under the latter
as the oldest name. I think
this disposition of our scaly
Cheilanthes is not what Mr.
Bs own Syn. Fil. would
teach us to expect from him

57 East 34th St.
New York, 29th June 1880

Dear Mr. Davenport,

I am
much obliged for your inter-
esting letter of 22d. Inst. Please
pardon my delay in answer-
ing. I have found the hot
weather very trying & have
had to defer any work which
could conveniently be postpon
ed.

As I interpret Mr. Baker's
notes he does not make
Ch. Fendleri & callolepis "one
form" except as he makes
them one by uniting them
with bigynophylla. What he
does say is that callolepis

is the same thing as Bigelow's White Cliff Creek plant, which is the Californian C. Fendleri of Synopsis Filicum." This is just what I had suspected — never having seen the White Cliff Creek plant. They had the two plants confused at Kew as well as here. And it is manifest that Mr. Baker draws a distinction between them now for, making all the plants nuyniophylla, he writes "callolepis is the form of the plant that is furthest away from type nuyniophylla, Fendleri 1.015 being a connecting link." How strong a distinction he draws is a matter of conjecture — for it seems to me that in throwing all our scaly Cheilanthes together as nuyniophylla he obliterates two distinctions altogether. I quite agree with you that if Mr. Baker gives up Fendleri (another surprise to me), & regards all of the plants to nuyniophylla he should include Clevelandii. I cannot see any ground on which it could be excluded. But it is not nuyniophylla, with its nodose caudex, piloze upper surface & tomentum under its scales, which would draw Clevelandii in, but the other plants with creeping

that the testimony of the exceptional scale which varies from the type should weigh against the hundreds on the same plant which show what is typical. When entire fronds vary as they do is it reasonable to require that their scales should be as exactly alike as if cut out with a die?

If this point of difference were removed I believe there would be little left to keep us apart in our views, for is it not mainly with a train of such scales as I do not regard that you bind Pendleri & callolepis together?

Throwing all our scaly Cheilanthes into myriophylla

& I cannot think it well considered. Who is ingenious enough to write a specific description of a group of plants of such widely differing organisms that would not be practically meaningless? & think the identity of the various plants would be completely lost. In short Mr. B's disposition seems to make "confusion worse confounded". & I doubt if it is the best that can be devised for our plants.

It seems strange that the authorities who have studied these plants should hold such widely different views. So far there is no agreement between you or Prof. Eaton or

Mr. Baker & the scales Christian

this questions seem no nearer

satisfactory solution than a

year ago.

Sorting the plants my own

way the muddle seems to

my mind to be cleared up.

With Fendleri, callolepis,

Clevelandii & nyctiphylla

as distinct species it seems

to me we have something

like order. A clear diagnosis

could be written of each

species & the various plants to be

easily determined. Throw them

all together & I think we have

something like chaos.

You report that you "have

found moderately ciliated

scales in Colorado Fendleri"

brings up again what I believe

has been the main point of

difference between us. You

may be right in giving the

importance you do to the

abnormal developments you

are able to find among the

scales of our plants, but I

cannot think you are. To

me they are practically of no

importance whatever, preferring

to be guided in my judgment

by what is characteristic of

the plants rather than by

what is not. The variations

you find in the scales I think

are only what might naturally

be expected & I do not think

seems to me very like throwing scientific botany to the four winds. Apply a similar scale of reduction of species to the 3,000 genus & what would be left? A few groups, divisions & subdivisions of genera. Specific lines would be practically abandoned. What is the use, then, of vexing ourselves about nice points of specific distinction? Let us call all the plants greens & — make a salad of them! "Better is a dinner of herbs" than scientific botany gone daft.

Still I am ready to study

these Cheilanthes all over again when I can get sufficient fresh material. I want especially a good many plants of true Fendleri & of course specimens of those plants I know but little about - your var. ciliata & Miss Pelton's Lake Co. Cal. plant. If I go East this Summer & am well enough I may visit Boston & Cambridge on my way home in the Fall. I want to see Bigelow's White Creek Cliff plant & Wright's 2126. I am anxious to get all the light I can on these Ch. lanthes for I cannot differ as I do

from all authorities without being much concerned lest it is I who have gone daft.

Do you know where I can get a lot of true Fendleri?

Miss Pelton very kindly spared me a small plant of her Lake Co. Cheilanthes but the specimen is too meagre to be satisfying.

Thanking you again for your letter I am

Yours

Austin

57 East 34th St.

New York, 19th July 1880

Dear Mr. Davenport,

I am very much obliged for the Ch. viscida kindly sent me which was rec'd. on Saturday. I am very glad to have it.

Yours

Wm Stout

57 East 34th St.
New York, 11th Jany 1.897

Dear Mr. Davenport,

I was very glad to see your handwriting again in the kind postal received from you this morning.

I, too, have been busy, quite up to the limit of my strength, but have had nothing in hand about which you would be likely to be interested since I wrote you about Aspl. rhizophyllum, Kunze. I was glad to see your note in the "Botanical Gazette" on that plant, & the more so because I had ventured to send some of it abroad under that name on "my own hook."

P. S.

I expect to start for Southern Georgia in about three weeks.

W.

I spent the latter part of the summer at Lake George, going into the Adirondacks (Blue Mt. Lake) in Sept. & returning home the middle of Oct. My pulmonary trouble & asthmatic condition has so reduced my strength that I was able to do but very little collecting, & since my return home I have rarely left the house except on some special errand. I spend all the time I am able to work over my ferns, but for a long time have been engaged mainly on foreign ferns & in putting up packages in payment of debts to correspondents.

I rec'd. two sets of Rusby's New Mexican ferns to-day. I think his *N. dealbata*, Kunze is probably (in my sets at least) *C. nivea*, Desvaux, but I have no *nivea* to compare it with & cannot speak positively. When you receive your specimens I will be obliged if you will examine them & let me know what you make of them.

I hope, too, you will let me know something about the "Manual" upon which you are engaged. Hoping to hear from you again soon I am, with regards & best wishes,

Yours

Wm Stout

57 East 34th St.
New York, 19th Jany 1887

Dear Mr. Davenport,

I am oblig-
ed for your favor of 17th inst.
& its enclosures which I re-
turn herewith. The story of the
Grey brothers is a very sad one.
I hope some good Ch. myris-
phylla from some collector of
happier experience may come
to us at length.

I was unable to make A.
dealbata of Mr. Rusby's plant
so named & felt little doubt
that it was A. nivea, &, in
ordering more of the sets the
same evening I wrote you,
I wrote R. to that effect. Have

& the lowest pinna are rather
shorter than the next two or three
above. These characters I think
remove it a long way from the
deltoid lanceolatum with its
narrow & acute divisions.

I doubt if a conclusive opinion
can safely be formed on such
meagre & imperfect material,
but I enclose the specimens
again that you may take another
look at them & them, if you in-
cline, you can solicit addi-
tional specimens from Mr. Brande-
gee & see whether Colorado is not
to be credited with another Botry-
chium. Mr. B. has kindly sent
me several things on application
but the fact that he has not yet
given me a chance to send him
anything in return makes me hesitate
to bother him with thanks for your kind wishes. Yours Most truly

not yet rec'd the additional sets.

Aside from Mr. Rusby's P. ternifolia I have none except some fronds from the Sandwich Ids. The N. Mexican plant seems to run from the type into a form which is fully bipinnate, but I do not see anything in the meagre specimens I have to separate it from that species. In view of what P. ornithopus can do in the way of departure from the type this vagary of ternifolia seems quite mild. Of course I want to see more of it.

Did the specimen of B. lanceolatum from Mr. Bandegee, you sent me come from the same locality as those he sent me? If so, perhaps he gathered two species there & I suggested as much when I wrote him asking him to re-examine his specimens. The plant you send is undoubtedly lanceolatum &, therefore, I think the two plants he sent me are not. I think they are near, if not, B. matricariæfolium - perhaps an abnormal development of it, for the lowest pair of pinnæ are placed so closely in the axil of the two segments that the barren segment is practically sessile. But the general shape of the barren segt. is oblong, all its divisions are obtuse

fined mucro. This mucro is very indistinct in some fronds but in well developed & characteristic examples it is clearly marked.

P. andromedaefolia is not, or but very slightly, glaucous, the superior basal pinnules of the lower pinna is always placed much nearer (about half the distance from) the main rachis than the inferior basal pinnule, (a good distinctive character I think between the plants in question), the ultimate pinnules are short stalked or sessile & their apices are emarginate or retuse & never with a mucro.

I do not know that Mr. R's plant is P. cordata. My point is that it is not andromedaefolia. Shall be glad to know what you think of it. Yours Truly Geo

57 East 34th St.
New York, 30th Jany 1887

Dear Mr. Davenport,

I recd. a letter from Prof. Eaton yesterday ~~yesterday~~ in regard to Mr. Rusby's New Mexican ferns. He writes - "The Woth. dealbata he sent me is rather large, but is, I think, that species rather than N. nivea.

I have had no Pellaea terni-folia from Mr. Rusby. What he sent me under that name is typical P. Wrightiana - such as Hooker figured under that name."

I have sent him to-day the

specimens of dealbata S. & M. & asked him to please determine them for me. I think if this New Mexican plant is to be regarded as P. dealbata it must go far toward bridging the gap between it & P. nivea.

I rec'd additional & better specimens of the "ternifolia" yesterday. It is plainly P. Wrightiana type as Prof. Eaton says, & Rusby's P. Wrightiana is the P. longinnervata form of the species.

Prof. Eaton, in reply to my indictment against his P. androm-edafolia, var. pubescens, says, in conclusion, "I think I will not at present modify the opinion expressed in the last Bulletin".

I will now give you the same points I submitted to him & would like to know at your convenience whether you think the plant can properly be referred to androm-edafolia.

Mr. R's plant differs from P. andromedafolia in being less compound & distinctly glaucous, in the basal pinnules of all the lower pinnæ being opposite or subopposite, in its larger ultimate segments or pinnules on longer petioles, & in the blunt rounded apex of the pinnules having a more or less well-de-

57 East 34th St.
New York, 24th Jany 1887

Dear Mr. Davenport,

I am obliged for your letter of 22nd Inst. rec'd. on Saturday P.M.

When I rec'd. my first two sets of Rusby's New Mexican ferns I noticed that the *P. flexuosa* of the sets was not characteristic of that species as I understand it & when I got the other two sets I looked it up a bit & concluded it ~~was~~ probably ~~has~~ might better have been named *P. cordata*, J. Smith. Then when I saw Prof. Eaton's note in "Torrey Bulletin", I ~~did~~ doubted its being a form of *P. androm.* var. *pubescens*. I am reasonably certain Mr. Rusby's plant is not *androm. var. foliosa* & excluding it from that species & thinking it is near, but not true, *flexuosa*, I seem to have no resource but to place it with *P. cordata*, J. Smith.

Do not go to more trouble about the Colorado *Botrychium* than your own interest in the matter would incline you to take.

Yours
Wm Stout

andromedafolia & to-day I have been comparing Mr. Rusby's plant with my ample specimens of andromedafolia, a species I have studied carefully in its growing state in Cal. & at home in regard to its relation to P. flexuosa, some of the San Diego Co. Cal. plant having been erroneously pronounced flexuosa by Prof. Eaton & Mr. Geo. Wall, of Ceylon.

Mr. Rusby's Pellaea may be identical with the plant named P. andromedafolia, Fée, var pubescens, Baker, for aught that I know, but I do not believe it to be a form of andromedafolia. I have noted several distinctive characters which seem to me to separate it specifically from that species & to-night, having occasion to write Prof. Eaton about Trinidad ferns, have laid my case against androsomedafolia before him. I still think, or guess, it is P. cordata, J. Smith, but I know that species only from description. I also mentioned briefly the dealbata-nivea matter.

P. ternifolia was missing from my last rec'd. two sets & I am at a stand-still for want of proper material.

I would like to hear further from you at your convenience in regard to these three New Mexican plants & especially

13. I think this is the pivotal character & it remains to be seen how it will generally be estimated. At present I incline to regard the new plant as fairly distinct from dealbata, though it is, certainly, very closely allied.

I have written Prof. Eaton to-day calling his attention to the character above noted.

I felt an uneasiness about the N. Mex.n Woodsia, which I have been unable to examine, & asked Prof. Eaton whether he or Mr. Rusby named it. He says — "Rusby's Woodsia I do not identify positively. It is near my W. Oregana but I am not satisfied that it is the same thing. I told him (I think) to mark it 'W. Oregana, var.?' I do not know what it is & am waiting till some specimens turn up which may prove the

57 East 34th St.
Newyork, 3d. Feby 1881

Dear Mr. Davenport,

Your favor of 29th ult. was rec'd. on 31st ult.

Prof. Eaton returned my specimens of Rusby's N. Mex. dealbata, kindly adding a fragment of N. minca, — Arizona — Lemmon, & wrote —

"They are all what I consider a form of N. dealbata, though larger & stouter, & of narrower proportions than the Kansas plant . . . They do go, as you say, a long way towards bridging the gap between that species & N. minca."

I have been looking over

these plants to again & more carefully & comparing them with true dealbata from Kansas, Arkansas & Texas. When I first rec'd Prof. Eaton's letter I was much inclined to fall into Prof. his opinion that the N. Mex.n plant was a narrow form of dealbata but I find myself at the last unable to accept that view without much uneasiness. The plant partakes so strongly of the characteristics of dealbata that I do not wonder he hesitates to remove it from that species, & am not sure he is not right in referring it there, & yet it differs so much from the typical deltoid ovate dealbata in its narrower & longer fronds & its narrower & more numerous pinnæ that I think it probable many botanists will hold it to be fairly distinct. If not admitted to specific rank it is at least entitled to separation from the type by the space of a variety.

The character which, more than all things else I have noted in the plant, influences me to regard this new cloth. as specifically distinct from dealbata, rather than as a good variety of that species, is the decidedly more numerous pinnæ. I find in my largest fronds of dealbata (type) have 5 & 6 @ 8 pinnæ (counting every thing a pinna but the apical pinnule) while the well developed N. Mexican plant has from 10

"matter, or till some other botan-
ist may work it up."

Have you any of Wood's San
Diego pubescent Pellaea +, if
so, is it the same thing as
Rusby's pubescent Pellaea? I
think my case against Rusby's
plant being a form of andromed-
aefolia is good on my speci-
mens, but I do not know the
Wood's plant nor Baker's var.

I wish I had all the Mexi-
can + So. Am. species. Scarcely
any of these have as yet come
round to me.

I got, at second hand, some
of Lemmon's Ferns but no N.
nivea + am still in the dark
about that species.

I am glad you propose to send some of the questionable Mexican ferns to Kew & I would like to contribute $5.# worth of specimens to the bundle. The authorities there should have ample material & it will be interesting to know what they think of the new things. As you will best know what you want to send I enclose $5— for you to invest instead of myself ordering the specimens sent to you by Kirby. If you can take time to get the material direct from New Mexico I think you will probably get specimens better adapted to your purpose, as the Mr. K. in New Jersey is not a botanist.

Yours Truly
Wm Starr

57 East 34th St.

Newyork, 7th Feby 1887

Dear Mr. Davenport,

Yours of 5th
Inst. was rec'd. this morning.
Mr. Pringle informed me of
his proposed western trip &
I have written him that I would
like fine specimens of all the
ferns he may collect & ~~solici~~
~~t~~ soliciting ample suits
of specimens of any new, or
otherwise especially interesting,
ferns he may find. I have
told him of my "No. 3. of Dr. Palmer"
(your "ciliate Fendleri" I believe)
of which Dr. P. got a few fronds
in the Prescott District, Arizona,
I also told him I would [illegible]

copious specimen: also of any scale, Cheilanthes he might find with a rodoxe rootstock & some living roots of the plant if possible. Doubtless you will post him up on the Ch. myriophylla matter. I am very glad he is going & I wish him all success.

Am sorry you have been so overworked. I am in the same fix myself. Am going South for a change of climate & a rest. Expect to start in a week @ ten days. My home address will remain good & letters will be forwarded to me. I shall be glad to hear, at your convenience, what conclusion you come to in regard to Kirsbyi pubescent Pellaea — at least as far as its reference to andromedaefolia goes.

With regards & best wishes

Yours

Wm Stark

would call. I hope he may reach here before I leave.

My New York address will always be good & I shall be glad to hear from you at any time. But I would not wish you to work yourself to death in order to write letters to ——. I suspect a long rest from pen work & its attendant correspondence would do you a great deal of good. With best wishes

Yours

Wm Stout.

A X

57 East 34th St.

New York, 18th Feby 1887

Dear Mr. Davenport,

I was glad to receive your postal of 16th inst. this morning, for I was afraid you were more seriously ill than now appears — though the present visitation is doubtless severe enough. Mr. Pringle wrote me that when he called at your place of business he found you had been at home ill for a week & it made me anxious about you.

I hope your eyes will soon be well again & that you will reap some benefit from the enforced rest you have taken.

I have rec'd a single plant from W. H. Rusby labeled C. myriophylla, Dear. & have asked him whether Prof. Eaton so named it. I have done but a few minutes work upon it & all I can say positively about it now is that it is not myriophylla for me, being very distinct from that species in its slender, creeping rhizome. It appears to be very near Ch. Fendleri, HK. &, if I do not on critical examination find it to differ materially from that species except in its more delicate & ciliated scales, I think I will willingly agree to refer it to Fendleri as var. ciliata as you proposed. I say this because I think it not unlikely that it may prove to be the same thing as my #3 of Dr. Palmer, Prescott Dist. Arizona, 1876, for which you proposed that name. But I have not yet seen enough of either plant to be at all sure what they are or whether they are the same thing or not.

If I am ever to do much more fern work I must take a long rest now. I had expected to start South last Monday night, but damage by flood detained me & I shall not leave till Monday or Tuesday evening next.

Mr. Pringle wrote that if he passed through New York he

57 East 34th St.
New York, 13th May 1887

Dear Mr. Davenport,

I am obliged for your interesting letter of 12th inst., rec'd. this morning, giving me the fern news.

I am pleased to learn that Mr. Baker rejects Rudbeckia pubescent Pellaea as a form of andromedaefolia. I felt sure that the different position of its basal tertiary rachises & its apiculate pinnules should suffice to separate it specifically from andromedaefolia. I have no specimen of P. cordata J. Smith but if it does not belong there I do not know where to place it & think it must be new.

that it runs quite into it. Wright has promised to send me additional material & I hope season & in time to give the whole group a more or less thorough investigation.

I am glad to have your news from Rusby & Pringle & to learn of your new Ch. Parishii, & of the turning up in Florida of A. trifoliatum. There seems to be enough turning up to keep alive the interest of both collectors & students.

I am very sorry you have had such a siege with your eyes & hope the improvement will continue & a permanent. While I was South I often wondered how you were getting along but did not like to tax you to answer a letter of inquiry.

I returned home better than when I left but am not able to do much work of any kind. I'll be glad to hear from you as often as you are moved to write.

Yours Mrs Stout.

Rusby's Woodsia may be a form of obtusa but I shall not undertake to determine it for my own satisfaction till I can get specimens in early maturity showing the involucre.

I am content to call his new Froth. W. dealbata provided it is separated from the type by the space of a variety. Its longer & narrower frond & more numerous pinna I think entitle it to be so distinguished &, so far as I know, it does not run into the type, but is always easily separable.

I have been for a long time trying to get together suitable material for a thorough examination of our mucronate Pellaeas. I have not yet in hand all the material I need, but from what I have seen thus far of the Wrightianas I like well Mr. Baker's views about them. There seemed to be no question that Rusby's ternifolia was P. Wrightiana, U.S. type, & that his other form (Wrightiana) was the P. longimucronata of Hooker. The two plants are closely allied & I don't know that it matters much whether only one is made a variety of the other or whether they be kept distinct as species. According to the ordinary standard of species making they may, I think, be fairly regarded as distinct. Then, Wright's dense form is, as Mr. Baker says, a variety of the latter & that is just so much in favor of keeping Wrightiana & longimucronata distinct. The specimens I have of Wright's plant show a marked approach to the latter & it is possible

57 East 34th St.

New York, 3d. June 1887

Dear Mr. Davenport,

I have been comparing some Ch. Sgovitzii, Fischer & Meyer, I have from India with your description & plate of Ch. Parishii & the things seem to be very near each other; how near I could not tell except by a comparison of characteristic specimens of the plants themselves.

Unless you have already made it I think you would

find a comparison of Parishii
with Sgovitzii interesting, &
if you have not at hand
an abundance of the latter
& would like to see my
specimens they are, of course,
at your service.

With regards

Yours

Frank

57 East 34th St.
New York, 11th June 1881

Dear Mr. Davenport,

I am very much obliged for your kind letter of 9th inst. rec'd yesterday. And be sure that I appreciate highly the fund of Ch. Parishii with which you have favored me. I wanted much to see it, but you had so little of it I did not like to ask even to borrow a bit of it to look at. I thank you very much for your kindness.

I have spent two or three hours on the specimen to-day & find it very distinct from Ch. Govitzii - more so than you should have been left on it. I very much want those Texas & Mexican ferns.

I also have some good Ch. Fendleri from Lemmon (obtained through a friend), & enclose one of his tickets. I, too, would like to know where it grew. My friend asked L. but the question was ignored in the answer to his letter. I hope you will find out. Lemmon is an energetic collector but otherwise a nuisance. He is a botanist for love of lucre, not of plants. So he thinks he has found a new Woodsia & ventures to name it himself after his wife. He sent out last winter Cyst. fragilis for W. obtusa & he ought to get beyond

I had supposed, & there yet remains the further good difference which your description & plate shows in its rootstock. I think it one of the most interesting & beautiful of our Cheilanthes & it seems far enough from any plant I know of to be in no wise dubious as a ~~good~~ species. And that is something to be thankful for.

Mrs. Cleveland's San Diego Co. Cal. plexuosa is simply fully developed and crowded-foliá the form which grows on the ground among the bushes. Mrs. C. gave me a good specimen of it & I visited the precise locality (about 25 miles east of San Diego in the mountains) & collected freely of it, noticing it closely & having at the time little faith in it. Returning to Newfork I studied it carefully, satisfied myself it was only andromedæfolia & wrote Prof. Eaton sending him copious specimens accompanied by Mrs. C's own specimens. Prof. E. frankly admitted his mistake & he has published in the "Supplementary Part" to his "Ferns of N. Am." a note to the effect that the San Diego specimens (of flexuosa) are all andromedæfolia.

I am sorry Dr. Palmer did not put up his ferns in sets separate from his phænogams & that there was not enough of them to go around. If I can [illegible]

that before venturing to name ferns new to him. However, it is pleasant to see that he is on good terms with his wife. Let us hope they will always agree together as well as Ananias & Sapphira & not be struck dead for little irregularities in the tickets distributed with their specimens.

I hope your eyes will continue to do nicely, but I presume it will be safe to favor them as much as you can for some time to come. Doubtless you have enough on your hands without attempting the work a general collection of the world's ferns would involve. And you have the [illegible]

bridge herbarium to assist to
on occasion.

Clarke's "Review" would be
almost superfluous to you
without the Indian Jesus to
apply it to. I asked the
question because of a possi-
bility of my having at some
time an extra copy which
I would want to place where
it would do the most good.

With regards

Yours

[illegible]

Flora of California and Nevada.

Cheilanthes Fendleri, Hook.

From end to end of the Sierra, also Coast Range.

Legit J. G. Lemmon.

much. In cutting it is very near var. esculenta (sp. Forst. as that fern grows in New Zealand) though it seems to fall within the line drawn by Hooker for candata. The strigoze pubescence, which proceeds from the sides of the midribs of the segments, is peculiar, its own. As a variety it is distinct from the common form of candata from the Southern States & is really, I believe, a new plant to our limits, though only the despised P. aquilina after all.

I am not one of those who despise it, however, & I want to get some more of this interesting form.

I have news to-day that a fine collection from the Sikkim Himalayas is on the way to me.

Yours faithfully

57 East 34th St.

New York, 15th June 1887

Dear Mr. Davenport,

First let me acknowledge the receipt of your postal of 3d. Inst. which I forgot to mention in my last letter.

I neglected also to refer to Rusbyi Cl. myriophylla (?) but I can only say that I have not looked at it since I wrote you about it last winter & I had not then examined it critically. I have written for more of it & will take it up when I can. Rusbyi & Bigelovii plants may be the same thing, & are possibly the same as my #3 of Dr. Palmer's collection & not specifically distinct from Fendleri

as you suspect. I have no opinion as yet & shall be glad when Pringle fulfills his promise to send me specimens of what he gets so that I can work it up. But, as you will be at work on the plants you have in hand, I will copy some notes I made & brought away, with a scale & some hairs from my #3. --

"The within branched hair was attached in one of the segments of my #3 of Dr. Palmer, Arizona, 1876, & the scale is also from the loose frond still root.

The tangled tomentum of branched hairs, or minute scales with long, branched cilia, is from the mounted frond in upper right hand corner of #383 Ch. myriophylla."

I have put had these objects under the microscope & they do not say "Pendia" quite as strongly as the superficial appearance of the plant does.

Am glad to hear you have the Palmer ferns.

I did not suppose you had gone so far astray as to regard Cheilanthes specimens as flexuosa but I inferred from what you wrote that you thought them a peculiar form of andromedaefolia, while I call the growth in that locality merely the fully developed typical plant.

Yesterday in going through a Florida bundle I came upon a specimen (fragment) of Pteris aquilina, var. caudata recd. last Fall from Miss Reynolds, who wrote that it was "from Mr. Chittis Indian River plants of Gazette fame", & it interested

MANHANSET HOUSE,

D. A. ROOD, PROPRIETOR.

SHELTER ISLAND, N. Y., 19th July 1881.

Dear Mr. Davenport,

I have to thank you for your favor of 18th Ult. with information about Mr. Pringle, & promising "particulars shortly" of the new Florida fern. I left home on 15th Inst. & yesterday rec'd. a letter informing me of the receipt there of a specimen of Woodsia lanceolata accompanied by your herbarium ticket. I am very much obliged for the specimen & am glad to have the particulars revealed to me in this way. I am glad Mr. Curtiss found it, as well as A. trifoliatum.

I have laid aside fern work till I return home in the Fall & have need of the rest. I have always my hands full when at home. I hope you are feeling well & that your eyes are recovering their normal strength.

With regards & best wishes

Yours Truly

Stout

My New York address will always be good.

57 East 54th St.

New York, 16th Oct. 1871

Dear Mr. Davenport,

Yours of yesterday is at hand.

Of course you want to see my Ct. C°. & Texas C°. obt.ca & have put it up with the head of *scoparium* from whom you ask for & send them to you to-day by express. Please retain them as long as you wish for your purposes & then return them by express at my expense. And if you do not wish to keep the *B. lanceolatum*? I rec'd from Brandegee may long ago,

& have spent much of my time in verifying & studying the things rec'd & am still in progress, & longing the, & the confusion now costs me too much loss of time.

Yours

Wm Stout

can find it you have it readily, please include in the package.

I presume the frond of Asplenium is the true plant & that the locality is authentic. I shall try to get some of it & can then, perhaps, tell better where it probably belongs. The only thing I can see in this frond to separate it from nodicioides, is its spinulose teeth. I doubt if it is a form of aculeatum but will look it up when I can.

I was sorry I had nothing I could spare to put in the package that you would be apt to care for.

I wrote yesterday to my two English correspondents for the desired development of the habitat for A. aculeatum which you want.

I wish very much that I could see you. We would, doubtless, find plenty to talk about & that is much less laborious than correspondence.

I am now arranging my ferns for mounting. Have a raft of stuff to go through, can only work at it at intervals & making but slow progress. I can never work to advantage till I get my accumulations in more orderly shape than they are now.

crowded pinna + stipe three times as long as the frond quite into the type of P. longipinnula, Wk. so I do not regard it as a good variety.

I will write to two English correspondents (one of whom is now living in France) for the small fern of A. acrobotrya, var. lobatum you want + get it if I can. Did Baird distribute plants of var. decipiens?

I have only a frond of it which Lemmon got with his neotenioides

I also need some var. Californicum + A. Chaudense + one or two other northern Calif. plants. Do you know any one (not Lemmon or Davenport) from whom I can probably get these things by exchange or purchase? Am in hopes Pringle will get them but he may not make his distributions for a year. I

57 East 34th St.

New York, 14th Nov. 1887

Wm. Davenport,

I was very glad to receive your kind letter of 9th inst. + learn of your improved health. I must thank you, too, for its enclosure which I read with much interest.

I knew, of course, that you were hard at work if you were well enough, + it was partly for that reason + partly that I had something special to say that it is so long since I have taxed you with a letter from me.

I spent the Summer very comfortably at Shelter Island (near east end of Long Island) + returned to city 5th inst. intending to

to Lake George & stay [illegible] weather drove me home. But the extremely hot weather, I struck here bowled me over & I did not begin to recuperate till it grew cool in Oct. So I have remained at home, working over my ferns when I was able & of course thinking often of you & wondering what you were doing &c.

I saw your advertisement for D.A. marginella & for southern & south western U. obtusa. Most things of the latter I have that could possibly serve you are a specimen I collected myself at Warm Springs N.C. & another that G. Richardson sent me from Dallas, Texas. The last I suppose you have, as you wrote Richardson about the same time I did & he probably sent you the same things he did me. Both the N.C. & Texas plants were gathered in early maturity & I will send them to you if you would like to work on them.

I have done no work on the little western Woodsia for want of suitable material. My letter of Feby last to Rusby requesting this season's specimens in early maturity unfortunately never reached him. I shall get them eventually but I don't know when.

I have been looking over the suite of specimens of the "dense form" of P. marginalis rec'd from W. G. Knight, & find that it grades from the extreme form

have heard nothing from him since he started West & have about given up hope of getting any specimens from him this year.

Always call on me for anything of mine you may want & let me know if I can help you in any way with your work.

With best wishes

Yours

[illegible]

South last winter. I expect to locate at "Uplands Hotel", Eastman, Dodge Co. Georgia, & that will doubtless be my address for for about three months. My New York address will always be good & letters sent there forwarded to me. Shall be glad to hear from you at any time.

With regards & best wishes

Yours

P.S.

I tried to get from Lemmon more of A. aculeatum, var. scopulinum & some " " " californicum & A. nevadense, but failed because he had none with the "big, useless roots" my friend demanded.

W.H.

57 East 34th St.

New York, 10th Jany 1892

Dear Sir. Davenport,

I was glad to receive your postal of yesterday this morning. It is always pleasant to hear from you & I was glad of the information it contained.

I start south to-morrow evening & will be unable to do any work on the Cheilanthes, Woodsias &c until after my return home about 1st May next. I am eager to get at them & have a large lot of material on hand. But it will be critical work & I feel that I have a siege ahead of me for which I shall need the long & bright days of May & June.

I have a large quantity of Rusby's Ch. Fendleri & of the plant which Prof. Eaton has referred to Ch. myriophylla & which I believe is the same thing as Dr. Palmer's 553 Ch. myriophylla (my #3. of Dr. P.'s collection). I found that Dr. P.'s 553 had Fendleri mixed with it & when I got Rusby's plants I found he had both plants in his Fendleri, but more especially or oftener he had Fendleri in his myriophylla. I then suspected that the two plants grew intermingled & on inquiry I found they did. I have just rec'd (through a friend) a lot of ferns from Lemmon, among them two specimens from Arizona (I think) he sent as Fendleri. One was true Fendleri & the oth. Ch. myriophylla & Eaton. This latter plant is certainly nearer to Fendleri than to any other of our plants, & it seems to me very far from my callolepis which Prof. Eaton also referred to myriophylla, & I do not see how he could consistently refer both plants, or perhaps I should say the new plant, there.

I am obliged for the offer of the loan of your specimens & will be glad to avail myself of it when I can use them. I shall need all the light I can get. The case would be comparatively simple with such material as the two Lemmon plants, but Rusby's lot makes the matter look foggy. When I have done a deal of work I shall be glad if I can come to a clear opinion.

I have gradually gained in strength since the weather grew cool & clear, & am now [illegible]

UPLANDS HOTEL

EASTMAN, DODGE COUNTY, GA.

H. L. HOYT.
G. G. HEATHER. } During the Summer connected with Grand Union Hotel, Saratoga Springs.

HOYT & HEATHER,
PROPRIETORS.

Eastman, Ga., 23 Jany 1882.

Dear Mr. Davenport,

I have recently rec'd. reply from one of my English correspondents to whom I applied for the desiderata from. of A. acuminatum you wanted. After apology for unavoidable delay in answering, he writes;- "I have not in my possession, nor am I at present able to get for you, a specimen of Polyp. lobatum, var. lonchitidioides. I have never seen it, I find that Moore says of it that 'it cannot be considered a permanent variety,' but he names several localities where it may be found & I will try to find some when the Winter is over if it will be of service to you so long hence."

I would like much to procure the plant for you, but do not feel that the exigencies of this case warrant me in asking my very obliging correspondent, who is a very busy man, to go in search of it. I shall write & thank him & suggest that he do not go to the trouble he proposes. I feel sure, however, that if he can conveniently get the

plant for me some of it will reach me eventually. The other gentleman to whom I applied is in France & unlikely to be able to get it. I have no reply from him as yet.

I don't believe var. scopulinum belongs with Acaulescentium. Probably it is a var. of nubigenoides. I have seen, however, only the frond I sent you.

I would like to know what you make of the things you have been at work on lately — the new scaly Cheilanthes, the Woodsias &c — when you have time to write.

I am very comfortably fixed here & hope to get braced up a little & be able to do some work next May.

With regards,

Yours Wm Stout

UPLANDS HOTEL

EASTMAN, DODGE COUNTY, GA.

H. L. HOYT.
G. G. HEATHER. } During the Summer connected with Grand Union Hotel, Saratoga Springs.

HOYT & HEATHER,
PROPRIETORS.

H

Eastman, Ga., 10th Feby 1887

Dear Mr. Davenport,

Your kind favor of 27th ult. was duly rec'd. I am much obliged for Mr. Sukedorf's address. I will write to him & also to Mr. Parish for specimens of Scopulinum.

Should you publish your notes on our scaly Cheilanthes no one, I think, would read them with more interest or value them more than myself. I have always hoped that sooner or later you would come to my opinion of the California plant, (my calloleps's), which, in view of the difference between you & Prof. Eaton in regard to it, is in a peculiarly unfortunate position. I doubt if the scaly Cheilanthes ghost will ever be laid till that plant is given specific rank.

Am sorry I cannot give you more information about the ferns of N. C. & Ga. The country about here is covered with pines & but few ferns grow here — the only point in Ga. I know anything about. I have seen here, O. regalis, O. cinnamomea, W. virginica, W. angustifolia

P. aquilina, var. caudata.
At Warm Springs N.C. I saw
P. vulgare
" incanum
Cheil. Alabamensis
" vestita
" tomentosa
Pellaea atropurpurea
Ad. pedatum
Campt. rhizophyllus
Aspl. ebeneum
" parvulum
" Trichomanes
" montanum
" Filix-fœmina
Aspid. acrostichoides
" spinulosum var. intermedium (I think the only)
Woodsia obtusa
O. cinnamomea
B. Virginianum
I have only recorded what I am sure I have seen or collected, but I remember that my Warm Springs list, made at the time, numbered 26 to 28 species.

With regards & best wishes

Yours

Wm Stout

UPLANDS HOTEL

EASTMAN, DODGE COUNTY, GA.

H. L. HOYT.
G. G. HEATHER.
During the Summer connected with Grand Union Hotel, Saratoga Springs.

HOYT & HEATHER,
PROPRIETORS.

Eastman, Ga., 20th Feby 1882

Dear Mr. Davenport,

Your kind & interesting letter of 14th inst. was rec'd on 18th inst.

You know that all I have seen of Scoparium is the single frond from Lennon which I sent you. It does seem to be intermediate between acubeatum & michauxioides, but I doubt if it is well, because it partakes of the characteristics of the two plants, to run them together. If the three plants were united under one name could any specific description be written by which they could all be recognized? Probably the best that could be done would be to describe one plant accurately, say acubeatum, & then add brief descriptions of the other two. This would afflict two of the plants with double names & the matter is further complicated by the fact that acubeatum already has its own varieties & enough of them, none being so far from the type as Scoparium let alone michauxioides. I think too much lumping of related plants only tends to confusion & is, therefore, to be deprecated.

I have written to Parish & to Suksdorf for specimens of their scopulinum & in time I hope to know more about this matter. From what I have now seen of the plants the only thing in scopulinum to separate it from nuttallioides is its aculeate teeth, which again is really the only thing in it which strongly suggests aculeatum. Its indusium apparently agrees with nuttallioides & here, I suspect, is a distinction from aculeatum. My impression is that the smaller plant has much the larger involucre, even if there be no other difference.

I think it is quite probable that Mr. Rusby, whose intentions are of the best, has, through inexperience, made some mistakes for which Prof. Eaton should not be held responsible. And I think it not unlikely that the two Woodsias he distributed this Winter under the name of mexicana var. may be distinct. When I questioned him about them (he called on me twice) he did not make it clear to me that Prof. Eaton had so named both plants & I suspected some irregularity. As to their habit he told me that the smaller, lax-growing plant, which often inclines to be cristate, grew always in deep shade, singly & scattered, while the other grew in patches on exposed rocks, having quite the habit of Ilvensis. I have now good specimens of both & will examine them critically when I get home.

I wish you all success with your book & I await its publication with much interest. Thanking you again for your interesting letter I am

Yours
Wm Stout

57 East 34th St.

New York 20th May 1882

Dear Mr. Davenport,

I have just got to work on Rusby's mixed up Woodsias. Looking over my stock of W. Oregana to-day I find it an ill conditioned lot of stuff unfit for critical work. If you have some unmounted specimens of it, can spare it for a while, I will be obliged if you will send it to me at your convenience & I will return it when through with my examination or as soon as you desire. Would like it from more than one station if convenient.

You may return me the W. C. & Texas W. obtusa I sent on

last winter ~~as~~ in same package
(if you are through with it)
+ please send by express at my
expense.

I have a note from Parisot
Bros. saying "We have visited
the station of Ch. Parisini +
after a careful search failed
to rediscover it" I am very
sorry.
Can you tell me what Pringle
is doing + whether he has yet
made any distribution of
his ferns? He has sent me
nothing yet.

I am by no means strong but
am able to do some work still.
How is your book progressing?
+ how are you?
With regards
Yours sincerely

5, East 34th St.

New York, 24th June 1.88.

Dear Mr. Davenport,

I have been at work on the Woodcocks to-day & find that I want to give Oregon a pretty thorough sifting. So if this reaches you before you put up the things I asked for in my hasty letter of 20th inst. I would be glad if you would send me your whole series of specimens of Oregons, if you can spare it for a while, or so much of it as you can spare conveniently. I suggest sending by express because it costs little or no more, sometimes less than the mail & is safer. I should not want

I have specimens of any this
of my own that I can,

I ran at Eastman, Ga.,
after I wrote you from there,
Polypodium incanum & a
single plant of Aspl. thelypteroides,

With regards
Yours

than I could learn from any [illegible]
& that is why I sent for [illegible]
want to find out the [illegible] is it [illegible]
of Mexicana & Oregana & [illegible]
they seem to approach each oth[illegible]

It is a matter of inductions & [illegible]
conclusions & much patient, careful work.
I am mounting & labeling the involu-
cres I take from some of the plants
I examine so as to have them for
future reference. I ought to have
begun to do this long ago.

I rec'd. recently from Mrs. Cleveland
some of his O. undicaule & he wrote
me he would spend the Summer
in Lake Co. Cal. I wrote him to be
on the lookout for the little Chil-
anthes which Miss Pulton found at
Bartlett's Springs, giving him a de-
scription of it, & also gave him an-
other station for it where he can
almost surely get it & the address
of Mr. John Wolfe, San Rafael, Cal. who
kindly sent me a plant he got near
there. I wrote W. urgently for more but failed to
get it. Will try him again next season &

57 East 24th St.
New York, 5th June 1882

Dear Mrs. Davenport,

I [illegible] your favors
of 24th ult. & 2d. inst. were duly
rec'd., the latter this morning &
the package of ferns also came
to day. I feel much indebted to
you for the Unalaska things &
the San Diego O. undicaule kindly
sent me, & which I am very glad
to add to my collection. All the
Unalaska ferns are very welcome
& the Aspidium Oreopteris, Sw. & B.
boreale, Wild., are the first examples
of those species I have seen, & of
course, are especial treasures. But
not less than the pleasure of pos-
session is that of being thus
kindly remembered.

And much obliged also for the
[illegible] of the Woodsias which

will get through with it & return as soon as practicable. But if you would like them sent back in less than a fortnight please let me know.

While I was South Mr. Rusby wrote me that he had sent his Bur. Bot. (Chilian) Woodsias to Prof. Eaton & he had separated them for him specimen by specimen into W. Plummerae, W. mexicana & W. Oregana & he (Rusby) sent me authenticated specimens of each. He had but two specimens of mexicana from that locality, one of which he sent me.

On examining these specimens I thought the mexicana & Oregana to be the same thing, the latter being a small, shade grown or inferior plants of the same species. in its full development was named mexicana. Their involucres show the same structure under the microscope & for the rest I have a suit of specimens from the same locality, which fill all gaps of development. I wrote Mr. Rusby for his Oregana lot so I might see if there was any of it that seemed to me Oregana & yesterday he brought it to me. It was all the same thing I had except that I picked a little of the glandular W. obtusa out of it, showing that Prof. Eaton did not examine the plants very carefully or else that Mr. R. had mixed them again.

The fact that Prof. Eaton had made two things of this one (if I am right) Bur. Bot. plant & nearly all of it W. Oregana, his own species, made me want to know more

send him some related plants to awaken his interest if possible. I am most anxious to get this plant. It is our C. caryophyllus if we have any, but I have not seen enough of its rootstock yet to know just what it is.

It is now past midnight & thanking you again for your kindness, I will bid you good night.

Yours
J Hurst

the other species & when I get through will report my conclusions. I will place brief notes with each of the plants & put everything as much in shape as possible to show what I have made of all the specimens I have thought it worth while to examine.

As you propose to critically examine these Brodiæas yourself when you can get around to them I would suggest that you borrow any mounted inflorescences & specimens as they will assist you vastly. I will arrange the plants, slides & notes so as to put the whole matter before you as well as I know how to & you find verifying my work a much easier task than doing it all yourself. You can, of course, do just as much work on the plants as you choose & you are by no means obliged to come to my conclusions. God night.

Yours truly

57 East 59th St.
New York, 10th June 1889

Dear Sir,

Yours of 5th inst. was duly rec'd. Thank you for giving me [illegible] of time on the Brodiæas. I find I need it. I can only work a part of the day (afternoons) & then not effectively. I have made some progress with the lot this week & hope to finish the investigation by the end of next week if everything favors. The Pegana is a very refractory plant & critical examination of it exceedingly tedious & difficult.

This afternoon I thought I was nearly through with my preliminary work on Pegana & Texica and & turned to your lot. Examining the specimens I [illegible]

Pringle, Arizona, April 1881 (I believe)

I am obliged to reject it as obtusa & for the present, place it with mexicana. I have taken but one involucre from this plant & will, of course, do more work on it before arriving at conclusive determination. This one involucre, a nearly perfect one, is divided into six lobes or scales (much as obtusa often is), which pass into the long, pointed bases of mexicana instead of being smooth notched & gland tipped as in obtusa.

Mrs. Baggs, Arizona 1880 specimen on the obtusa sheet & also for, for the present, to mexicana.

Am very tired to-night & only write to inform you of these two things I turned up this afternoon thinking it possible that prompt advices of these alleged mistakes will be of use to you. I believe you are managing Pringle's for but do not know whether he has distributed any of them yet. He has not sent me any though I gave him an order before he first started for Arizona & repeated it last winter when he was at home in Vermont. I asked him to give me a special selection from his collections whenever he conveniently could.

When I get through examining the various plants I shall spread out everything I have called mexicana for comparison & examine & compare all the mounted involucres from those plants; & proceed in the

U. S. —

Have you any of
Cherokee Texas U. S.
tin, tin hoods or tree
nail? [illegible]
[illegible]

57 East 54th St.

New York, 15th June 1881

Dear Dr. Engelmann,

I can do no more work on Pinguicula Santa Catalina Mts., Arizona, April 1881, Woodside till I get additional & more mature specimens of it. But I must do some more work on Cr. obtusa with reference to it & that I will try & do to-morrow.

I find it will by no means do to place this plant with Cr. mexicana because the dissepiment of that plant consists mainly of long cilia, while that of the present plant consists mainly of individual scales; and it is removed from obtusa by the half-dozen holes or rents

is to which the indusium is cleft being straight + fixed at their apices. The involucre is very large, especially for so small a plant, + when compared with those of mexicana + obtusa might fairly be regarded as a hybrid from the two, for it seems to unite in itself the characters of both. The leaning is, perhaps, rather toward obtusa + it may be the plant will have to go there as a variety. Otherwise, I think it must be made a species. As far as indusium is concerned the plant would also easily be distinguishable from mexicana + from all the forms of obtusa I have seen, + would be in quite as comfortable a position as W. scopulina with obtusa on one side + Oregana on the other.

The question of authoritative disposition of the plant must now be left to you, while to settle definitely my preference I must first see more of it + of obtusa.

Lemmon's plant (very young) on ~~Diane~~ from Santa Catalina Mts, on same sheet as Pringle's from same locality, is the same thing as P's plant, + Lemmon's W. obtusa var. was from St Thomas Isl. for also belongs here.

Will report on the other species when I can get round to them.

Oregana + mexicana do not seem together, [illegible]

peculiar involucre & the disposition of its fronds to be certain make it a good variety.

Of V. scopulina I have not examined involucres from Howell's Oregon plants. It seems to occupy a position so immediately between obtusa & Oregana that heaven is to be thanked for the minute, slender, pointed lobes it bears which go a long way toward separating it specifically from its neighbors.

I put out another line to-day for C. myriophylla.

I scarcely understand your question about the Woodsia indusium being "normally entire, but which splits open at maturity". I have never found that it was entire at any stage, but it opens with the growth of the sorus as does the calyx of the rose with the swell of the fruit.

Yours truly
Stout

57 East 34th St.
New York, 15th June 1882

Dear Mr. Davenport,

Yours of yesterday is at hand. You must pardon me having written you in regard to Pringle's Woodsia as if you did not know its involucre was ciliated, & was the more encouraged to this by your position by the presence on the same sheet, & also as obtusa, of Mrs. Bagg's plant which is plainly W. mexicana, & inferred you had given these specimens at the most superficial notice.

I did not feel like working yesterday, & did but little. Late in the day I looked over many

obtusa lot a little more & I have now seen enough of the inclusions of this plant to know that it is extremely variable. The inclusions of this Pringle plant & of V. obtusa, var. glandulosa exhibit the most marked variations from what may be called the ordinary form I have seen. The conviction grows on me that Pringle's plant will have to be referred to obtusa in spite of its ciliated involucre, the latter feature, however, entitling it to rank as a variety. And what seems most conclusively to connect it with that species is the occasional presence of the marginal gland which marks all obtusa involucres I have seen.

I suspect that Sammon "builded better than he knew" when he made this plant a variety of obtusa, for his name, mana, is descriptive merely of the size of the plant; it could not refer to the involucre for that is unusually large. He may not have known it was ciliated at all. Did he publish the plant anywhere?

A descriptive name should refer to the character which constitutes the variety & I would be glad to recognize Sammon's or else's name for the plant if it is possible to give it one under the circumstances.

I approve of the name of V. obtusa, var. glandulosa for the plant it belongs to & think its big glandular state

Oregon, the plant upon which the species, in part, was founded. Of your specimens I have assigned here

The Dalles, Oregon, Jos. Howell
Wyoming Territory, Dr. Parry, 1873
Clear Creek Cañon, Colorado, A. Brown (not so entire plant)
Sierra Mojada, Brandegee, 1873
Mojave Desert, (San B. Mts?) Calif'nia, W. G. Wright
+ of my specimens (not duplicates of yours)
S. S. Brandegee (from Mrs. Barnes)
Lemmon, Webber Lake,

This species has stood so long that it does not require any special review, but there is one feature of the plant which I think worthy of mention. The whole tissue of the plant seems to be resinous + the involucre is hard + brittle as though agglutinated, + adheres to the lamina so that it is very difficult to remove it without fracture

57 East 34th St.
New York, 19th June 1882

Dear Wm. Davenport,

I finished my work on the Western Woodsias on 17th inst. unless you should send me, as you spoke of doing in your last letter, another plant or two to examine.

I know nothing of Fici W. Mexicana except as interpreted by Prof. Eaton. In considering this species I have taken as the type those plants in my collection which I know he has referred there; viz: the first two in the following list, all of which seem to me to be the same thing.

Mogollon Mts, New Mexico, Rusby 1881
Burro " " " " 1880
Cañoncito " " " Brandegee 1879

Chiricahua Mts, Arizona, Lemmon 1.881
20 mi. below Manitou, Colorado, M. E. Jones, 1.878

And of your plants (not duplicates of mine)
Clear Creek Cañon, Colorado, A. Brown, 1878 (one frond)
. . . . . Arizona, Mrs. Bagg, 1.880
Mexico, Parry & Palmer, ex Herb. J. H. Redfield

W. Mexicana, from what Mr. Rusby tells me, has quite the habit of W. Ilvensis. His Mogollon Mt. plant grew in dense patches on exposed rock. His Burro Mt. form grew in the deep shade of rocks, the plants scattered. The plants themselves tell me the same thing. These two ~~plants~~ fairly include all the variations to be seen in the various plants I have assigned here, & I do not find in the lot any modifications which may not be accounted for by difference in exposure. My suite of W. Ilvensis collected by myself at Smuggler's Notch, Mt. exhibits precisely the same modifications, due to bright sunshine & to shade & moisture, as does this Mexicana lot. On the whole the plant does not seem to me to be a variable one &, I consider it ~~fairly~~ distinct from our other Woodsias, the nearest of which, I think, is Oregana. In inferior development of Mexicana the cilia of the involucre are shorter & the articulations closer than in the type & it then requires careful examination to distinguish from [illegible] forms of Oregana as Baron Geyer's Sierra Mojada plant.

In considering W. Oregana Eaton, I have taken as the type Howell's specimens from The Dalles

I [illegible] you wish to make your own examination of the Woodsias please call for my specimens & mounted involucres if you want them. As to the latter you may depend that in every case they came from the plants they are ascribed to in the labels.

Can you give me Mr. Pringle's present address? I want to ask him to reserve for me some of his Santa Catalina Mt. Woodsia. It is an especially interesting plant to me & I believe & have learned something from it. Please let me know what disposition you think of making of it.

I have a lot of stuff which I have held in reserve for you for two or three years but have always hesitated to send it lest you should say "an enemy hath done this". It was mainly collected by my brother, when inexperienced, at the Delaware Water Gap, Pa. & its fault is that it comes [illegible] to of botanical completeness, being loose pounds. It includes W. Alvensis, " Claytoniana; " regalis, Ch. aestita, Aspl. Filix-foemina, A. thelypteroides, B. virginianum, W. virginica, A. Goldianum, A. Novaboracense, A. marginale, A. acrostichoides, A. spin. var. intermedium, B. fluctibotula, Cyst. fulvifera, Phegopteris Mexicana, on the other hand, yields its indusium in the same tractable way that obtusa usually does.

I do not find the indusium of either of these Western Woodsias to be as uniform as though cut out with a die. But each has its characteristic one & I think, according to the ordinary standard of species-making, all the species may be called good. Among the plants I have examined I only find two worthy to be considered varieties:- the var. glandulosa of obtusa & Mr. Pringle's Santa Catalina Mt Woodsia which I think is probably better regarded as a variety of obtusa

also. I think there is good reason to suppose this plant to be a hybrid of obtusa & Mexicana. Beside the involucre other features of the plant seem to support this view.

I have examined the various plants in our two bundles with considerable care & have made the best disposition of them within my knowledge, but I do not claim to have made no mistakes either in regard to individual plants or to species as a whole. I have done the best I could & am now ready to turn the entire lot over to your revision & better judgment. And when you are through I will be much obliged if you will kindly favor me with your own views & mention any mistakes

of mine you deem incorrect. The finding of Mexicana & obtusa (a small form from Colorado) in my Oregana, & of Mexicana in your obtusa & Cystopteris fragilis in your Oregana shows that both bundles needed a sifting & I will not assert that they do not need another one!

May I have a couple from the batch of bore fronds of E. C. Howe's, Yonkers, N. Y. obtusa? I mounted some involucres from them & would like them for the station.

I will return your specimens now whenever you wish & with anything I have in duplicate which you may want. Please let me know if you have any desiderata.

polypodioides, Pheg. hexagonoptera & O.
sensibilis. If you think you can
make use of it in any way I will
send it to you. I wish I had
something you would value to
send.

With regards

Yours Mr Stout

White Salmon, W. T. July 24th 1882.

George E. Davenport, Esq.

Dear Sir:

Will you please name the enclosed ferns for me? I suppose these portions are enough for identification. Nos. 1 and 2 I have seen for the first time this season; the first is, I think, Botrichium Virginicum. Nos. 3 and 4 are perhaps the same: Aspidium munitum.

Very Truly Yours

W. N. Suksdorf

with specimens of
Polypodium, Woodsia
&c. &c. &c.

White Salmon W. T. Oct. 8th '83

George E. Davenport, Esq

Dear Sir

I send by mail to-day a parcel containing a few ferns. You would oblige me very much by naming them for me.
You was so kind to offer to send me your Catalogue. I would be very glad to receive it. Your Supplement & Check list were duly received. Please accept my thanks for the same.

Very truly Yours

W. N. Suksdorf.

No. 1. Botrichium simplex? Sterile segment at or above the middle, nearly sessile

2. B. ternatum. Hairy; sterile segment almost always 2, one from the preceding year, short-stalked.

5. Polypodium vulgare, I think. Segments very obtuse, sometimes short and obovate.

7. Aspidium munitum var.? Fronds small, narrow; pinnæ many.

8. Same as 7.? Fronds broader; rhachis less chaffy.

9. A. acrostichoides? I collected this with no 8, taking it for the same thing, but it seems to belong to a different species

10. Probably this is Lycopodium annotinum but spikes often 2 together.

12 Isoetes Bolanderi? I have specimens of I. Bol. from Mt. Paddo, determined by Dr. Engelmann. This plant seems to be a different thing Leaves much longer and more slender.

White Salmon, W.T. Nov 14, 1885

George E. Davenport. Esq.

Dear Sir.

I mail herewith a little package of ferns. Will you kindly send me their names? and very much oblige

Yours truly

W. Suksdorf

White Salmon Nov. 16, 83

Dear Sir,

I send to-day another little plant which, I suppose, is Azolla Caroliniana, Willd.

Yours very truly

W. N. Suksdorf

White Salmon, Dec. 11, 1885

Dear Sir,

Your report on ferns &c. was duly received. Please accept thanks of your much obliged

W. N. L.

POSTAL CARD.

NOTHING BUT THE ADDRESS CAN BE PLACED ON THIS SIDE.

U.S. POSTAGE ONE CENT

George E. Davenport, Esq
Medford,
Mass.

836— #2 Isoëtes Bolanderi
also #3 from Subalpine of Mt Adams

White Salmon, Wash. T. March 12, 1886.

George E. Davenport, Esq.

Dear Sir.

I found here to-day a little Isoëtes which may prove to be a new species. At any rate it appears to be new to all countries north of Cuba. I enclose a few samples thinking they might be of some interest. It is a small, terrestrial plant with flattish or three-sided leaves and a three-lobed trunk. Probably it is not I. Cubana. I will collect better specimens later on.

Yours truly

W. N. Suksdorf

White Salmon W.T. March 13th
86

K V

George E. Davenport.

Dear Sir,

I examined nearly 100 specimens of the Isoëtes yester-day and found the trunk 3-lobed in every case. I believe I have sent out some specimens as I. Nuttallii. It is apparantly much like the latter. Whatever it is, it will be interesting to you, I hope. To-day I enclose some spores of this plant. The leaves are sometimes 5 or 6 inches long I believe.

Very truly yours

W. N. Suksdorf

Cambridge, Mass., Jan. 24th 1887.

H

Dear Mr. Davenport,

J

My letter to you does not go across the continent this time. Dr. Gray had the kindness of giving me an opportunity to become more of a botanist. I came from W. T. in the early part of October. Your interesting letter of Sept. 6th was duly received. Please excuse me for not writing sooner. It took a long while for my plants to travel from one ocean to the other. They reached me but a few weeks ago and I am able at last to send you a few more specimens of that 3-lobed Isoëtes. At the same time I follow your advice and send some to Mr. Baker. I think I have 2 or 3 ferns which I will send you some day, but it is nothing of special interest.

Very truly yours

W. N. Suksdorf

Botanic Garden

Cambridge Mass. Feb. 16th '87

K

Dear Mr. Davenport.

I received your postal card yester-day and I thank you for your invitation. If I go to Boston some day I shall try to meet you.

At the same time with your postal I received a reply from Mr. Baker, which I enclose herewith. I am much pleased to know that I have at last something of interest for you, although it is not a true fern.

I am very glad to hear, that you expect to come to Cambridge soon. You will no doubt find me at the Herbarium.

Very truly yours

W. N. Suksdorf.

K

White Salmon, Wn
Nov. 9th 1895

Mr. G. E. Davenport
Medford, Mass.

Dear Sir,

Your letter of Oct. 25th is at hand. I did not send the little Asplenium you mention in your letter. Since I returned from Cambridge I have not sent specimens to you. Since that time I have collected only two or three species. If I collect other species, I shall send specimens to you again.

Yours truly
W. N. Suksdorf